



CITY OF DUNDEE

REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE

YEAR ENDING 31ST DECEMBER, 1924

DUNDEE:

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Public Health Department,
West Bell Street, Dundee, July, 1925.

The Lord Provost, Magistrates, and Town Councillors
of the City of Dundee.

Gentlemen,—

I have the honour to submit my Annual Report on the health of the City of Dundee during the year 1924.

The report follows the general arrangement adopted in previous years, and in this introductory letter, I refer to a few of the questions dealt with which I consider of special importance. Its perusal and a reference to the index may serve to direct the reader to any subject in which he has a particular interest.

As measured by vital statistics, the health of the city last year was not too satisfactory. The death-rate at all ages and from all causes was 16.4 per 1,000 population compared with 14.7 for 1923. The rise in this rate is explained on pages 13 to 16 as being due mainly to an increase in the number of deaths from the respiratory and also from the infectious diseases, the cold and wet weather being considered partly responsible for the unusual prevalence of the respiratory infections.

One record was established. The death rates from pulmonary tuberculosis and from all forms of tuberculosis, namely, .85 and 1.23 respectively per 1,000 population were the lowest yet reached in Dundee.

The infantile death-rate was 120 per 1,000 compared with 98 for the preceding year. This subject is dealt with at considerable length on pages 18 to 32. It is pointed out that although the figure for 1924 was an unusually high one, the infant death-rate is steadily falling and is likely to continue to fall in the immediate future. Compared with other communities and with the whole of Scotland, the rate of decline in Dundee was very rapid during the last 30 years, and further, the fall in the infantile death-rate was more marked than the fall in the general death-rate. Observations are sub-

mitted on the diseases responsible for the decline in the Dundee figure, and on the age periods under 1 year at which the fall mainly occurred. On pages 24 to 28 some comments are made on the relationship between the industrial employment of women and infant deaths, and special reference is made to the rates obtaining during the years of abnormal unemployment in the city. It would seem that unemployment did not necessarily have an adverse influence on the infantile mortality figures, but appeared rather to favour low rates. On pages 28 to 31, several factors of importance to infant welfare are dealt with. These include sanitation, housing, education, the child welfare scheme, &c.

Infectious diseases prevailed to a very unusual extent during 1924. Scarlet fever was epidemic during the whole twelve months, being especially prevalent during the first quarter and the last two quarters of the year. Measles appeared in epidemic form in October and diphtheria prevailed throughout the whole year. Altogether 5,832 cases of infectious disease were brought under the notice of the Department, the figure for 1923, which was also an epidemic year, being 4,111. The various infectious diseases are dealt with under separate headings in the body of the report.

There were no new developments in the Tuberculosis Scheme, but reference is again made to the unsuitability of the premises in Tally Street for the purposes of a tuberculosis dispensary, and also to the necessity for additional in-door accommodation being provided for cases of tuberculosis.

The work of the Child Welfare Scheme was continued along the usual lines. This subject is dealt with under the heading Infant Mortality, and also in a separate section of the report.

The Venereal Diseases Treatment Centre for male patients, which was established at the Reception House, Fleuchar Street, in 1923, has proved a complete success. This scheme will again be under consideration during the present year, and it is hoped that the Town Council will agree to the erection of an ad hoc centre on the ground at Salem Street, Constitution Road. Female patients are still being dealt with at the Out-Patient Department of the Royal Infirmary, but provision for both sexes should be made in the new centre proposed to be erected at Salem Street.

The subject of housing is not dealt with at any length, but reference is made to the Chief Sanitary Inspector's report issued early this year. It cannot be said that the situation has improved much. A limited number of new houses has been completed, and no slum dwellings have been demolished during the period under review. The Blue Mountains Area is being dealt with as an Improvement Scheme, and before the end of the present year, many of the

houses in that area should be ready for demolition. Actual demolition will have to wait the supply of suitable alternative accommodation for the dislodged families. The machinery established in this country for the provision of new houses and the removal of old ones, while no doubt sufficient for the requirements of normal times, seems to be too unwieldy to deal promptly with a housing crisis.

An extensive outbreak of food poisoning occurred in the city in August immediately after the Dundee Holiday Week. The outbreak was very thoroughly investigated and a summary of the results of the investigation are set forth on page 76.

Sanitation, Factories and Workshops, Meat Inspection, Milk Supply, and Preservatives in Food are dealt with under the appropriate headings.

The usual co-operation with other local authorities interested in the health of the city was continued during the year. I have again to thank Dr A. E. Kidd, the Chief Medical Officer of the Dundee Education Authority for his very valuable assistance, especially in the control of the infectious diseases amongst school children, and also in dealing with verminous persons and houses.

The reports of the Chief Sanitary Inspector and the various executive medical officers are included in this report. They form a record of a good year's work and will be found of considerable interest.

I take this opportunity to acknowledge with gratitude the loyal support given me throughout the year by the members of the staff of my Department.

I am, Gentlemen,

Your obedient Servant,

W. R. Burgess.

Medical Officer of Health.

STAFF OF THE HEALTH DEPARTMENT.

Medical Officer of Health.....	W. L. BURGESS, M.D., D.P.H., D.T.M. & H.
Chief Sanitary Inspector.....	ROBERT MITCHELL.
Veterinary Inspector.....	HUGH FERRIER, M.R.C.V.S
Chief Tuberculosis Medical Officer.....	J. H. HUNTER, M.B., D.P.H.
Assistant Tuberculosis Medical Officer.....	ARTHUR MEEK, M.B., D.P.H.
Child Welfare Medical Officer.....	MARGARET SCOTT-DICKSON, M.B., D.P.H.
Medical Officer, Ante-Natal Clinic (part time)	MARGARET FAIRLIE, M.B., Ch.B.
Dental Surgeon—Special Child Welfare Dental Clinic (part time)—	
	H. GORDON CAMPBELL, L.R.C.P., L.D.S.
Medical Officer, Venereal Diseases Scheme—	
	CHARLES AVERILL, M.A., B.Sc., M.D., D.P.H.
Medical Officer, Women's Section, Venereal Diseases Scheme—	
	ANDREWINA LAIRD, M.B., D.P.H.
City Analyst (part time).....	ANDREW DARGIE, B.Sc., A.I.C.
Matron, King's Cross Hospital.....	Miss M. A. CLARK.
Senior Resident Medical Officer, King's Cross Hospital—	
	WILLIAM MCKIE, M.B., D.P.H.
Junior Resident Medical Officer, King's Cross Hospital—	
	J. R. GRAHAM, M.B., Ch.B. (resigned 1st August, 1924).
	J. A. DENNIS, M.B., Ch.B.
Matron Ashludie Sanatorium.....	Miss A. HENRY
Clerical Staff.....	7 CLERKS.
Sanitary Staff.....	1 SUPERINTENDENT AND 17 INSPECTORS.
Health Visitors—Child Welfare—Miss HUNTER, Superintendent, and 9 Others.	
	Tuberculosis 3 NURSES.
	Venereal Diseases.....2 MALE NURSES AND 1 FEMALE NURSE.
Day Nursery Staff.....	4 MATRONS, 8 NURSES, etc.
Disinfecting Officers, Ambulance Drivers, Hospital Staff, etc., etc.	

ANCILLARY INSTITUTIONS.

Bacteriological Laboratory, University College.
Director—Professor W. J. TULLOCH.
Assistant—W. THOMSON, M.B., Ch.B.
Infant Hospital, The Lodge, Broughty Ferry.
Matron—Miss EDWARDS.
Resident Medical Officer—RUBY N. FOGGIE, M.B., Ch.B.
Seafield Hostel, Lochee Day Nursery, etc., etc.

Vital Statistics.

The following is a summary of the principal statistics for the years 1923 and 1924 :—

	1923.	1924.
Population	170,901	171,295
Number of Deaths (corrected)	2,517	2,809
Death-rate per 1,000 population (corrected)	14.7	16.4
Deaths of Infants under One Year	410	464
Infantile Death-rate per 1,000 Births ...	98	120
Marriage-rate per 1,000 Population ...	8.3	7.6
Number of Births Registered (corrected)...	4,199	3,865
Birth-rate per 1,000 of Population	24.6	22.6
Illegitimate Birth-rate per 100 Births ...	7.9	7.2
Number of Deaths from Pulmonary Tuberculosis	167	146
Death-rate per 1,000 from Pulmonary Tuberculosis ... ..	.98	.85
Death-rate from all forms of Tuberculosis	1.43	1.23
Death-rate from the Principal Epidemic Diseases	1.17	1.69
Deaths from Enteric Fever	3	1

Annual Report— 1924.

Population, Deaths and Death-Rates.

The population of Dundee at the middle of 1924 is estimated by the Registrar General to have been 171,295, which figure has been used in preparing the vital statistics for the year. According to this estimate the population of the city has increased by 394, the figure for 1923 being 170,901.

The age and sex distribution of the population is shown in the following table which is prepared on the assumption that the age and sex distribution of the population obtaining when the census was taken in 1921 has remained the same.

Ages.		Both Sexes.	Males.	Females.
All ages	...	171,295	76,001	95,294
0-	...	4,031	2,065	1,966
1-	...	10,908	5,505	5,403
5-	...	15,354	7,667	7,687
10-	...	16,608	8,256	8,352
15-	...	32,420	14,321	18,099
25-	...	24,961	10,366	14,595
35-	...	22,058	9,189	12,869
45-	...	20,436	8,931	11,505
55-	...	14,047	5,895	8,152
65-	...	7,692	2,942	4,750
75-	...	2,482	796	1,686
85 and over	...	283	59	224
Not stated	...	15	9	6

The vital statistics for the year cannot be considered as very satisfactory. There were 292 more deaths in 1924 than there were in 1923, the general death-rate for the former year being 16.4 and for the latter 14.7 per 1000 population. The infantile death-rate also rose from 98 to 120 per 1000 births. On the other hand, the death-rates from all forms of tuberculosis and from pulmonary tuberculosis were the lowest yet recorded, being 1.23 and .85 per 1000 population respectively. The corresponding figures for the preceding year were 1.43 and .98.

No particular disease or group of diseases was wholly responsible for the rise in the general rate, there

being an increase in the number of deaths from every class of disease except from the diseases of the nervous system, which showed a slight fall. The respiratory, circulatory, digestive, and the infectious groups were mainly responsible, particularly the first and last of these, which together accounted for much more than fifty per cent of the increase in the general death-rate.

In my report for 1923 some observations were submitted on the respiratory death-rate, the comparatively low general death-rate for that year being mainly due to a fall in the number of respiratory deaths. During 1924, the number of such deaths increased by over 100 from 401 in 1923 to 502 in 1924. Even the latter figure is well below the annual average for the decennium 1914-1923, viz. 556, but the excessive number of deaths from respiratory causes during 1918, the influenza pandemic year tends to swell unduly the average figure. The majority of the respiratory deaths are probably due to factors in operation every year, but the increase last year has probably some relation to (1) the unusually cold and wet weather which prevailed during the summer months, when the death rate from the respiratory diseases is usually very low, and (2) to the outbreak of measles which commenced in the last quarter of the year. Such an outbreak is usually accompanied by an excessive number of deaths from bronchitis and pneumonia. That these influences had some effect is suggested by the fact that while the respiratory deaths were as would be expected, fewer in the summer than in the winter months, still the number of such deaths during each of the four months June, July, August and September very greatly exceeded the average numbers for the corresponding months during the ten years 1915-1924. Further, an unusual number of respiratory deaths occurred in November and December when measles began to prevail, especially among children at ages under 5 years.

The infectious diseases were also responsible for an increased number of deaths and shared with the respiratory diseases, the main responsibility for the rise in the general death-rate. There were 117 more deaths from diphtheria, scarlet fever, measles, whooping cough, infantile diarrhoea and influenza in 1924 than there were

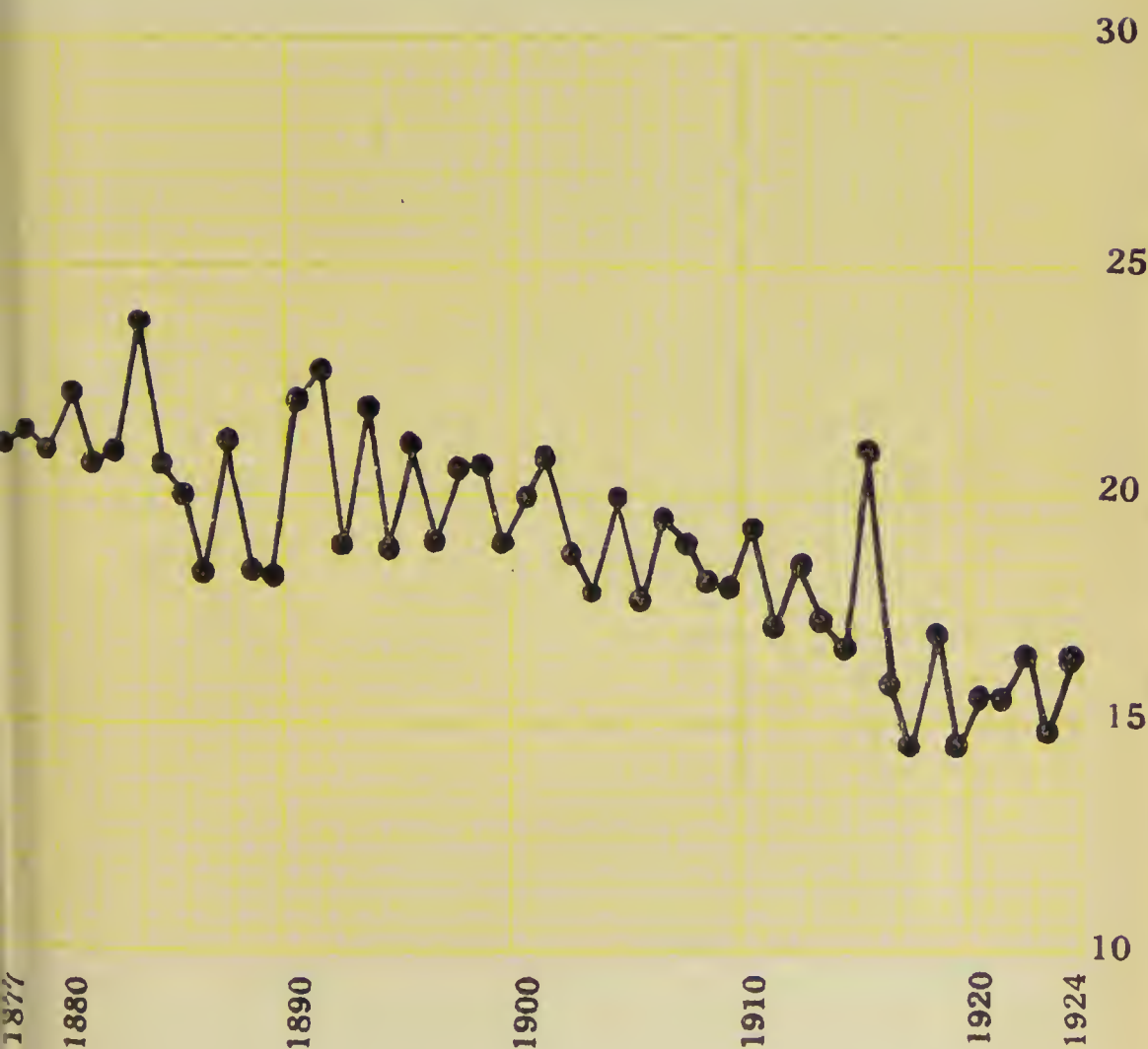
CITY OF DUNDEE

DEATH RATE

(at all ages and from all causes)

per 1000 Population.

1877-1924



in 1923, the number for the latter year being 210 and for the former 327. The infectious diseases are considered separately and in more detail under the appropriate headings in this report.

The monthly death-rate was highest in December when it was 23.7 per 1000 population and lowest in June with 12.8. The figures for June, July, August and September and those for November and December were higher than the average rates for the corresponding months during the 10 years 1915-1924. No doubt as already suggested the unusually high rates for the four summer months were due mainly to an unusually large number of deaths from respiratory causes, while the outbreak of measles would account for the high figures for the last two months. The rate for the first quarter of the year was below the average.

In the table submitted below are the general death-rates in the various city wards for the year 1924; placed alongside the average annual death-rates during the decennium 1915-1924.

Ward.	Population (1924).	Death-rate during 1924.	Average death-rate 1915-24.
1	14,539	15.75	16.29
2	12,359	16.58	17.60
3	16,508	17.20	16.46
4	19,363	14.82	14.93
5	22,934	13.47	14.41
6	17,588	18.59	18.50
7	17,829	16.54	15.39
8	18,821	17.64	17.07
9	20,428	16.64	15.07
10 & 11	10,926	13.45	12.94

As usual Ward 6 shows the highest rate and Wards 10 and 11 the lowest. Wards 2, 3, 6, 7, 8 and 9 have death-rates above that for the whole city, viz, 16.4, while Wards 1, 4, 5, and 10 and 11 are below the city rate.

The death-rates from all causes at the various age periods for the years 1922, 1923 and 1924 are as follows ;—

Age Period.			1922.	1923.	1924.
Under 1 year	...	...	109	98	120
1- 5 years	...	...	17.5	25.2	30.5
5-10	"	...	2.5	3.06	3.6
10-15	"	...	2.03	1.3	1.7
15-25	"	...	3.5	3.2	3.3
25-35	"	...	4.8	4.2	4.3
35-45	"	...	8.3	6.2	6.3
45-55	"	...	13.9	9.8	11.6
55-65	"	...	27.0	25.7	29.1
65-75	"	...	70.5	59.1	62.01
75-85	"	...	144.8	130.04	151.5
85 and upwards	...	...	260.5	280.1	265.02

All age periods except those over 85 shared in the rise in the general death-rate which occurred in Dundee last year. This rise does not, however, appear to have been equally distributed, the increase in rate being more marked at ages under five and from five to fifteen than at the older ages especially from 15-45 which show only a trifling rise. At ages over 45 the increases in rates tend to become more apparent but they do not approach those for the early groups. The year 1924, although a comparatively severe one for all ages was a specially hard one for infants and children in Dundee.

The causes of this uneven distribution in the increase in rate are again to be found in the unusual prevalence of certain of the infectious diseases, and of the respiratory infections. The former operated entirely on children and the latter at all ages, but more particularly on the young and old. There were 129 more deaths at ages under 15 during 1924 than there were in 1923. In the former year there were 64 more deaths from the three infections, measles, scarlet fever and diphtheria, than in the latter year, and all of these occurred at ages under 15. Another infectious disease, diarrhoea and enteritis, accounted for 34 extra deaths affecting only infants and children. There also occurred an increase of 81 in the total number of deaths from pneumonia and of these 33 occurred at ages under 15 years. At the older ages, a rise in the death-rate from pneumonia and bronchitis accounted for the higher figure.

The observations submitted above are based mainly on a comparison between the two years 1923 and 1924, during both of which infectious disease was very prevalent. A scrutiny of the figures for a series of years, however, provides similar evidence.

Infantile Mortality.

Infantile
Mortality
in Dundee.

There were 464 deaths of infants at ages under one year. Calculated on the number of births during 1924, the infantile death-rate was 120 per 1,000. The figure for 1923 was 98 and for 1922, 109. The 1924 rate is therefore an unsatisfactory one when compared with those for the immediately preceding years. The mortality among infants in Dundee has been slowly but steadily declining since 1916-1917 when the official child welfare scheme came into operation, and special measures were established for safeguarding the health of infants and children. Any interruption in progress requires very careful investigation in order that the adverse influences may be countered in appropriate fashion. The infantile death-rate may frequently be somewhat high in this area, but there is an unfortunate tendency for strangers and even for residents in the city to describe Dundee as being a most unhealthy place for infants and children. There would appear to be a feeling abroad that in this respect it is far worse than any other community and that little, if any, improvement has been effected. The matter is rather a serious one because the control of disease is of far greater importance at the young ages than at any other. Further, many of the diseases affecting infants and children are preventible and should be prevented. A high infantile mortality rate usually means a high sickness rate and death-rate at the succeeding ages and loss of efficiency at the adult age periods. It is necessary, therefore, that the question should receive very close study in order that the true position may be ascertained and action taken as may be indicated. As the infantile mortality was unusually high last year, the time may be considered as opportune to give the general subject of infant deaths in this area rather more consideration than is usual in an annual report. This is all the more necessary, because there is evidence that the high figure for 1924 has given rise to some uneasiness in the public mind.

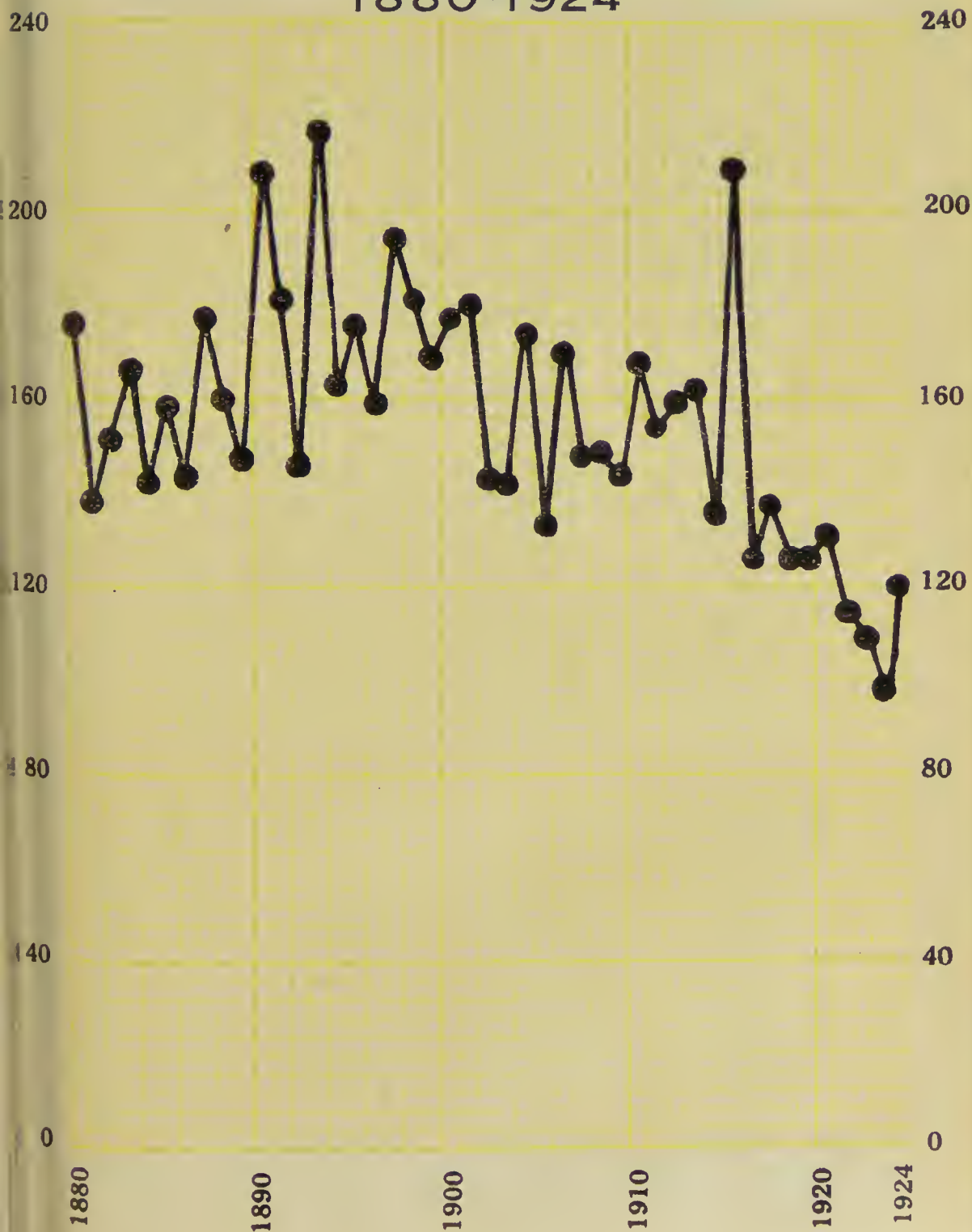
The following are the infantile death-rates in Dundee each year since 1890.

CITY OF DUNDEE

INFANT MORTALITY.

INFANT DEATHS (under 1 year) PER 1000 BIRTHS.

1880-1924

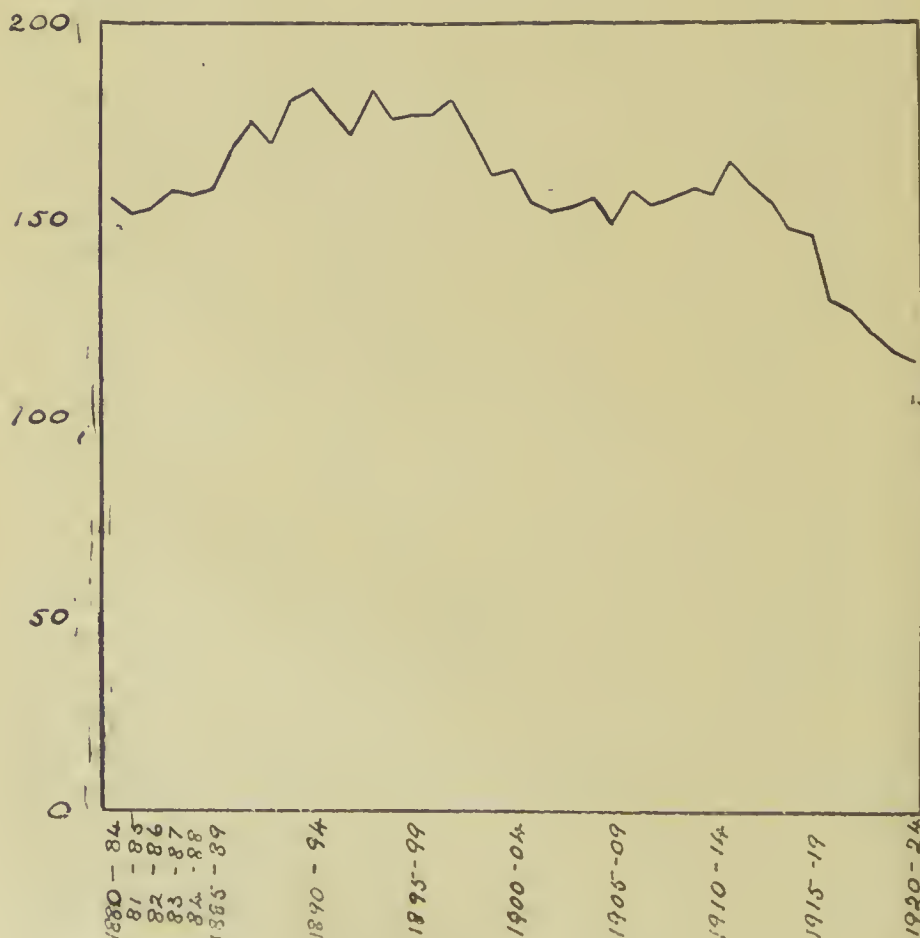


1890	208	1902	143	1914	136
1891	181	1903	142	1915	209
1892	146	1904	174	1916	126
1893	217	1905	133	1917	137
1894	163	1906	170	1918	126
1895	176	1907	148	1919	126
1896	159	1908	149	1920	131
1897	194	1909	144	1921	114
1898	181	1910	168	1922	109
1899	169	1911	154	1923	98
1900	177	1912	159	1924	120
1901	180	1913	162		

These are shown in graphic form on the opposite page, going back to 1880. The general trend is obviously in a downward direction, at any rate from 1916 until 1923. Before that period there is too much zig-zagging in the curve to give an exact representation of the course of events and the high figure for 1924 may suggest that the tendency is now for the rate to rise rather than to fall. That may be the case, but I do not think so. In exhibiting annual rates in graphic form a ready means is provided of comparing the figure for any one year with that for any other year, but unless either a steady rise or a steady fall is maintained over a period of years it may be difficult to determine easily the general trend of events, and in public health it is evidence of continuous progress, even although it may be slow, that is desired. Very low statistics, as for example, an usually low infantile mortality rate for a particular year must be considered as a matter for satisfaction in that it means that fewer infants died during that year than during previous annual periods. It must not, however, be concluded that the low rate will be continued during subsequent years. In the same way, a high rate for a particular year must be properly interpreted. In vital statistics a year is an extremely short period, and the events which occur during that time and from which the various rates are prepared are too few in number to give results on which conclusions can be based without very careful consideration. This is particularly so in the case of infant mortality. This rate is calculated on the number of deaths of infants at ages under one year per 1,000 births occurring during that year—both comparatively small numbers, much smaller than those from which, for example, the general death-rate is calculated, namely the number of deaths at all ages per 1,000 population. The infantile

death-rate is, therefore, very liable to accidental variation. Influences operating for a limited period may have a very marked effect on the annual infantile mortality figure. Epidemics of infectious disease, such as infantile diarrhoea, whooping cough or measles are the usual causes of the marked alterations in the infantile mortality figures and of the swinging of the curve in the graphic presentation of these figures.

In order to get a clearer idea of the general course of events in regard to infant mortality and the probable tendency in the future, it is necessary to consider periods of time longer than one year or to use average annual figures for a period of years. In the curve given below the average annual infantile mortality is given for 5 yearly periods since 1882, each individual year being considered along with the two years before it and the two years after it.



This smoothed curve shows that since about 1915 there has been a distinct and real decline in the infantile death-rate during the last ten years. Indeed, since

about 1890, with the exception of a short period ending in 1915, there has been a steady fall from over 180 to 114. During the ten years 1880-1890 the rate rose from about 155 to over 180. The graph provides definite evidence that the Dundee infantile death-rate has fallen considerably, and it at least suggests that the rate will continue to fall in the immediate future.

The decline in the infantile death-rate is not peculiar to Dundee but has also taken place in other communities and in Scotland as a whole. In Dundee, however, the rate of decline has been much quicker during the last thirty odd years. It is admitted that the need was greater. In 1890 and the following years, Dundee had an infant death rate very much higher than that for the whole of Scotland and higher than any other town in Scotland. In the Registrar General's Annual Reports for the period, there appears with monotonous regularity the statement that among the Principal Towns in Scotland, Dundee had the heaviest infantile mortality. The position is not quite so bad now. A more rapid rate of fall has enabled Dundee to take its place with the other burghs, and although now and again it may show the highest rate, the margin of difference is now a very modest one compared with thirty years ago. The year 1920 was the last occasion on which Dundee had the highest infant death-rate among the larger Scottish burghs, while last year, 1924, with its unusually high figure, four of the larger burghs had heavier rates.

Dundee compared with whole of Scotland.

The death-rate at all ages and from all causes has also declined considerably both in Dundee and all over Scotland during the last half century, but unlike the infantile mortality the fall occurred at a slightly greater rate in the whole of Scotland than it did in Dundee. Thus the average annual general death-rate for the quinquennium 1890-94 in Scotland was 19.1 per 1000 population and for the period 1920-24, it was 13.9, representing a fall of over 27 per cent., distributed in a very uniform fashion over the intervening period. The corresponding figures for Dundee were 21 per 1000 and 15.8 per 1000, a fall of under 25 per cent. While in Scotland the infantile mortality rate declined at the same rate as the death-rate at all ages, in Dundee the former rate fell much faster than the latter.

Diseases
responsible
for fall in
Dundee
figure.

The reduction in the Dundee infantile death-rate has been brought about to some extent by a fall in the number of deaths from certain of the infectious diseases but mainly by a marked reduction in the number of deaths from diseases of the digestive system, especially diarrhoea and enteritis. Within the last few years there appears to have been only a slight reduction in the number of deaths among infants from respiratory diseases or from the congenital group of diseases. The infant death-rates from the various groups of diseases for each of the 12 years 1913-1924 are shown below. The congenital group includes all deaths certified as due to atrophy, debility, marasmus, premature birth, congenital malformations, syphilis, and injury at birth. The digestive group includes diarrhoea and enteritis, and the infectious diseases group includes tuberculosis.

Year.	Con- genital.	Diges- tive.	Respira- tory.	Infectious Diseases.	All Other Causes.	Total.
1913	62	40	28	12	20	162
1914	58	33	15	17	13	136
1915	64	38	38	51	18	209
1916	63	20	15	13	15	126
1917	57	24	24	13	19	137
1918	53	16	24	20	13	126
1919	60	13	30	8	15	126
1920	53	21	36	10	11	131
1921	58	16	19	13	8	114
1922	50	11	27	10	11	109
1923	46	4	21	13	14	98
1924	54	12	25	12	17	120

The period covered by the above table is a short one, but the figures are of some interest. The details for each year are noted chiefly for purposes of permanent record but a fair measure of the real progress made in each of the groups can be obtained better by a study of the following table which gives the average annual infantile death-rates from all causes and from each of the four disease groups for three quinquennial periods, 1890-4, 1913-7 and 1920-4.

			1890-94.	1913-17.	1920-24.
All Causes	...	...	183	154	114
Congenital	...	...	53	61	52
Digestive	...	...	32	31	13
Respiratory	...	...	44	24	26
Infectious Disease	...	...	25	21	12

It would seem that there had been no reduction in the deaths from causes described as congenital. The average rate for the middle period was unusually high and the progress in 30 years is represented by a fall of about 2 per cent. The digestive disease group, the chief member of which is diarrhoea and enteritis, shows a fall from 32 to 13 or nearly 60 per cent. during the same period, but it would appear that practically the whole of this reduction was affected during the last few years, for the average figure for the period 1913-17 was 31. A general survey of the annual number of deaths from diarrhoea and enteritis (before 1911, diseases corresponding) at ages under 2 years for more than thirty years past bears this out. Definite progress has therefore to be recorded in regard to this group of diseases, and probably the rapid rate of decline of the infantile mortality rate during the last few years is due mainly to this fact. During the 30 years under observation the respiratory death-rate has fallen by about 40 per cent. from 44 to 26 per 1000 births, but it would appear that during the last few years no progress has been made, the rate having actually risen very slightly. The infectious disease rate fell from 25 to 12, equal to more than 50 per cent. From the table, it would appear that this decline took place largely during the last few years, but the average rate for the 1913-17 period may be unduly inflated owing to an exceptionally severe and fatal epidemic of whooping cough in 1915. A marked fall in the infantile deaths from tuberculosis has played an important part in the progress made, but there is evidence that within recent years we have secured a somewhat better control over the acute infections. There is however a great deal yet to be done and there is room for a great improvement in the figures.

As is the case everywhere, the death-rate is very high at ages under 1 week and under 1 month, gradually diminishing as age advances. The nearer an infant is to the completion of its first year of life, the better are its chances of survival. Since 1890 there has been a reduction in the infant mortality at all ages under one year. This reduction was least evident at ages under 3 months and most evident at ages from 6 to 12 months. During the last 12 years, there has been no decline in the death-rate at ages under one week but at ages under

Various
ages under
one year.

four weeks there was a slight fall and at the older ages a reduction occurred at a rate increasing as the age approached 12 months.

Infantile
Mortality
and the
industrial
employment
of women.

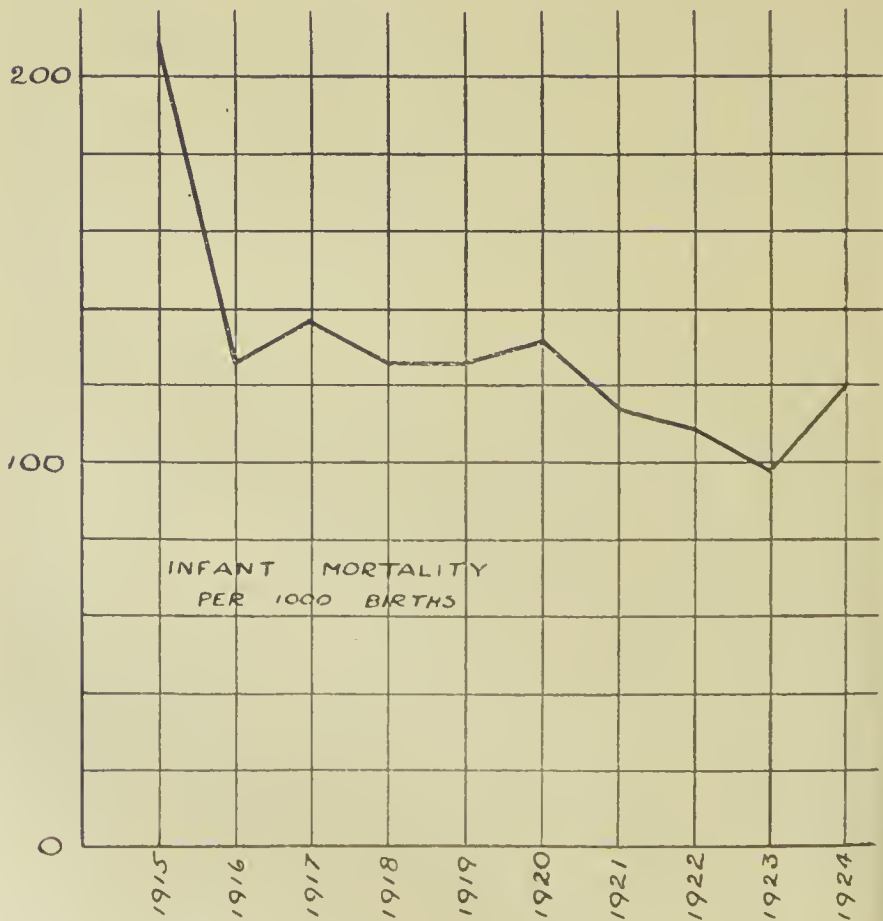
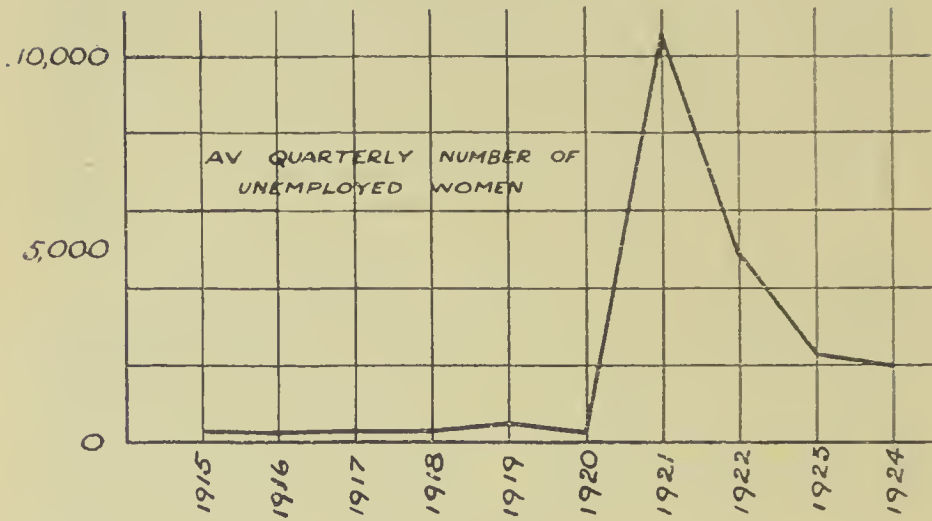
In the Fifth Annual Report of the Scottish Board of Health (1923) the following statements are made "Of the four cities, Dundee has distinctly the worst record for the under-one-week death-rate", and also "In Dundee probably the high proportion of married women in factories makes a difference to the under-one-week and under-one-month death-rate."

The working mother in Dundee must be considered as an important factor when considering infant morbidity and mortality, one of many factors certainly, but a very important one. It is however very difficult to produce evidence in support of the statement. As the above extracts suggest, a high under-one-week and under-one-month death-rate may be due to this cause, the child being influenced through its mother who, being employed in a factory during the period of pregnancy, is unable to maintain an adequate standard of hygiene. The child is therefore born unfit to cope with the many dangers it has to meet in its new environment and dies before it has lived a week or a month. The employment of married women in factories is therefore part of the very important question of ante-natal hygiene.

But the working mother may influence the health of her child at a later period in its existence should it survive the many risks immediately following its birth. If the mother has to return to the factory within a few weeks after her confinement, the infant is deprived of its natural food and also of the maternal care so very essential to its welfare. There is plenty evidence obtainable in Dundee. Too many infants are looked after during the day by neighbours, probably too old to work themselves, many of whom are quite unfit to undertake the care of young infants. Day Nurseries have been provided by the Corporation and also by voluntary effort for the day care of such infants, but even these excellently managed institutions cannot take the place of the mother and they only deal with a very small proportion of the large number of infants of working mothers in Dundee. While this influence

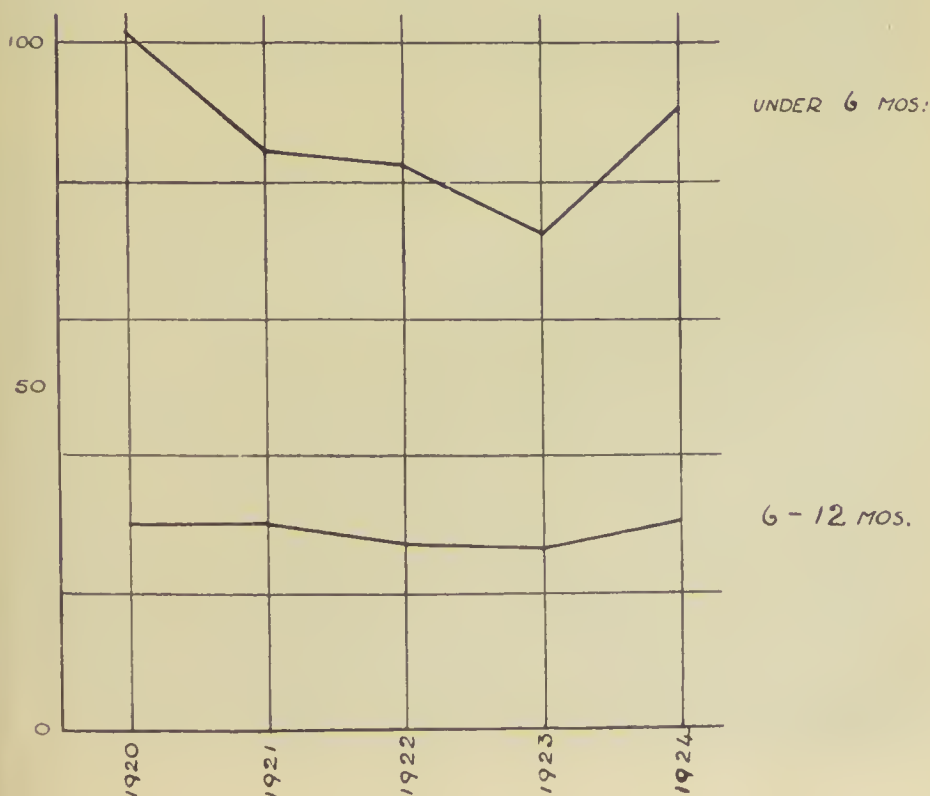
operates during the whole of the first year of life it will obviously have much more effect during the first half than during the second half of the first year. During the last few years, unemployment has been very widespread in Dundee, and as a result poverty and distress have prevailed to an alarming extent. It would be natural to expect that the infantile mortality would rise at such a time, but, on the contrary that rate reached its lowest recorded level during this period of distress. It might be considered as rather daring to suggest that unemployment in the community is likely to be beneficial to the infant section of the population whatever the effect may be on the rest of the community. Nevertheless, if the unemployment affects the married women, I am of opinion that the infant population may derive very great benefit. They are more likely to get their natural food and also to be looked after all day and every day by their own mothers. Even if they are not breast fed, no doubt the parents will see to it that their infants are sufficiently nourished even although they themselves have to suffer. The charts given on page 26 represent graphically (1) unemployment amongst women in Dundee from 1915-1924, and (2) the infantile mortality each year during the same period. The unemployment curve is prepared from figures kindly supplied me by the Manager of the Employment Exchange. They represent the average quarterly numbers for each year from 1915-1920 of women applicants for employment and from 1921-1924 the average quarterly number of unemployed women registered each year at the Exchange. The curve is not intended to be an exact measure of the extent of unemployment among women in the city, but merely a general indication of the position because the figures used reflect not only actual fluctuations in employment in the town but also the effects of the wider application from time to time of the Unemployment Insurance Scheme.

CITY OF DUNDEE
UNEMPLOYMENT AND INFANT MORTALITY
1915 - 1924



The lines followed by the graphs on the opposite page seem to indicate that in a rough way the infantile mortality varied inversely with unemployment. As unemployment among women increased the infantile mortality fell, on unemployment becoming less acute, the infantile mortality tended to return to its former level. Too many factors are in operation in the production of a high or low infant death-rate to permit one to describe this relationship definitely as one of cause and effect, but it can at least be said that the evidence is suggestive. As has been already stated maternal care is of more importance during the first six months of life than during the second six months. If unemployment among women workers in Dundee was in any way responsible for the drop in the infantile death-rate shown in the above chart, it must be that the fall was due chiefly to a saving of lives at ages under 6 months when the mother's nourishment and care are so essential. That that actually occurred is shown in the following chart which gives graphically the death-rate at ages 0-6 months and 6-12 months per 1000 births during the period 1920-1924.

CITY OF DUNDEE
INFANT MORTALITY (0-6 AND 6-12 MONTHS)
1920 - 1924



The difference between the two curves is very marked and shows that the drop in infantile mortality was due almost entirely to markedly reduced rates occurring at ages under 6 months, the period from 6 to 12 months having only a very slight effect. This is unusual and suggests that some new factor was in operation during the period under review. Further study of the subject seems to show that the fall in the rate at ages under six months was due to a reduced number of deaths from diarrhœa and enteritis and also to a smaller number of deaths certified as due to certain of the causes included in the congenital group (malnutrition, debility, marasmus, etc.). All these conditions are likely to yield to some extent to proper nursing and it seems reasonable to conclude that the reduced number of deaths may to some extent be attributable to greater attention being given to their infants by unemployed mothers.

The fall in the number of deaths from diarrhœa and enteritis during the last few years occurred not only in Dundee, but in other communities and also in the whole of Scotland. As this disease is very fatal at ages under 6 months, the death-rates at this age period showed an unusual fall in these other areas, and also in the whole country, but the decline was not so well marked as it was in Dundee. It would certainly appear that some factor was in operation in Dundee which was not in operation to the same extent at least elsewhere.

The fall in the infantile mortality which has occurred since 1890 is a result of improved sanitation and of improved education. During the last quarter of a century, the water carriage system has become general throughout the city ensuring the immediate removal of sewage from dwelling houses. It is only in the outskirts of the city that the conservancy system is to be found and even there it is very rare. Nevertheless, the system is not yet by any means efficient in Dundee and cannot be so considered until every individual house has its own sanitary convenience. The water-closet used in common by more than one family is a too frequent cause of dangerous nuisance, especially as is too often the case, the convenience, is situated in an inaccessible place. Another nuisance which is very

Factors
affecting
the health
of infants.

Sewage
removal.

slowly disappearing and which is of extreme importance to infant welfare is the fixed-in ashpit. Too many of these abominable contrivances still survive in the city to endanger the health of infants and children and until they disappear absolutely, it cannot be said that the Local Authority has done all in its power to safeguard the health of the infant citizen. A separate receptacle for each household is desirable but failing that the moveable covered bin must be provided. Under no circumstances should the fixed-in ashpit be permitted to survive and the fact that there is still a very large number in existence in Dundee points to the necessity for more vigorous action with a view to their abolition. The cleansing of streets and of back courts has also reached a higher standard of efficiency, but there is still ample room for improvement. All these factors have a very direct bearing on infantile mortality, especially on the death-rate from digestive diseases.

Ashpits
and
Ashbins.

There is a very direct relationship between housing and infant mortality. It is well known that infantile mortality is higher in one roomed houses than in two roomed houses, and higher in two than in three, and so on. Dundee, with its 67.4 per cent. of 1 and 2 roomed houses would therefore tend to have a high infant death-rate. Small houses very often mean over-crowding with insufficient ventilation and insufficient natural lighting. These conditions would predispose to affections of the respiratory tract, particularly pneumonia and bronchitis. During the last 10 years, the housing insufficiency in Dundee has been very acute, and it is significant that, as noted above, the respiratory death-rate, although previously falling markedly, has not declined at all during the last 10 years. Improved housing will undoubtedly be reflected in an improved infantile mortality figure. Along with housing may be mentioned the question of the pollution of the atmosphere by smoke, a nuisance which, like housing, is a predisposing cause of lung diseases. Unfortunately little if any attention appears to be given now to this matter in the provision of new houses, and the unhygienic and uneconomic practice of producing heat by burning raw coal in each individual house is permitted to continue, even in new buildings.

Housing.

Air
Pollution.

Improvement in the milk supply has no doubt

Milk
supply.

played a part in the infantile mortality decline, but a great deal has yet to be done. If natural feeding is not possible for the infant and cow's milk has to be given, then it should be seen to that only a graded milk is used, sold under a license issued by the Local Authority. Any amount of graded milk is now available in Dundee.

Education.

The above observations are submitted to illustrate advances made in the matter of sanitation. Improved education has also been mentioned as being in part responsible for the decline in infant mortality. No doubt general education has performed a very important function by raising the general standard of domestic and personal hygiene. Many authorities are of opinion that the marked advance in general education since the Education Acts came into force is the principal factor in the decline. One of the main functions of the Child Welfare Scheme is the special education of expectant and nursing mothers on the subject of infant hygiene, and this special education is more likely to be effective if the standard of general education is high. Since the establishment of the Child Welfare Scheme in Dundee, the infantile mortality rate has assumed a much more stable character, and has shown a more steady downward tendency than ever before. It is difficult to avoid the conclusion that these special activities for the welfare of infants and children are meeting with some success. In few towns are there so many obstacles to be overcome, especially those due to the employment in factories of married women. Nevertheless, the work appears to be having a very definite influence. Here and there the Dundee Scheme requires strengthening. The ante-natal section, for example, cannot be considered as complete. As has been pointed out already, the hygiene of the pregnant woman has an effect on the under-one-week and under-one-month death rate. A larger number of expectant mothers must be given individual instruction on the subject of hygiene. Excellent work along these lines is being done at the Ante-Natal Clinic held weekly at the principal Child Welfare Centre. At this Clinic, steps are taken to ensure that the pregnancy is following a normal course, and any departure from the normal is attended to while still susceptible of correction. Cases arise now and again which can only be dealt with in the

wards of a hospital. The lack of ante-natal beds for such cases is undoubtedly a weakness in the Dundee Scheme. In the post-natal part of the Scheme, additional health visitors are necessary, and the Town Council have already agreed to two additional appointments being made. The medical work of this branch of the Public Health Department has become very heavy and very soon the Local Authority will have to consider the question of adding to the medical staff. It is hoped that before the end of the present year the whole of the building at 1 Nelson Street will be available for child welfare work. An addition to the number of beds at King's Cross Hospital to enable a large number of cases of measles and whooping cough to receive institutional treatment is also necessary. The treatment of such infections must be considered as a definite and very important part of the child welfare scheme.

More information regarding maternal and child welfare is given in a later section of this report, and also in the report of Dr. Dickson, the child welfare medical officer.

The infantile mortality figure for 1924 is an unusually high one, but as has been pointed out it must not be used as a measure of progress. The rates in other communities and in the whole country were also unusually high. Comparing 1924 with 1923, the rate for the whole of Scotland rose by 24 per cent. while in Dundee, it rose by just over 22 per cent. In Dundee, the high rate was due to accidental causes operating for a comparatively short period only. Infectious disease was unusually prevalent, especially measles, and that disease coupled with the cold and damp weather was responsible for a large number of deaths from pneumonia and bronchitis. The conditions responsible for the high rate in 1924 continued to operate during the first quarter of the present year (1925) and must influence to some extent the 1925 figure.

The 1924 figure.

The following table gives the certified causes of death at the various ages under 1 year for 1924.

CAUSE OF DEATH.	Under 1 week.	1 and under 2 weeks.	2 and under 3 weeks.	3 and under 4 weeks.	Total under 4 weeks.	4 weeks and under 2 mths.	2 and under 3 months.	3 and under 6 months.	6 and under 9 months.	9 and under 12 months.	Total deaths under 1 year.
Measles - - -	...	...	...	...	...	...	...	5	8	9	22
Scarlet Fever - -	...	...	...	...	...	1	...	...	...	1	2
Whooping-Cough -	...	...	...	...	...	...	...	6	5	6	17
Diphtheria and Croup	...	...	...	...	...	...	...	...	...	...	...
Tuberculosis { Lung - - -	...	...	...	...	...	...	...	...	...	...	...
General - - -	...	...	...	...	...	...	...	...	1	...	1
Abdominal - - -	...	...	...	...	...	...	...	...	...	...	...
Brain - - -	...	...	...	...	...	...	...	...	...	...	...
Other Forms - -	...	...	...	...	...	...	...	...	...	1	1
Meningitis (not T. B.)	...	1	...	1	2	...	...	2	3	2	9
Convulsions - - -	7	1	...	...	8	...	...	5	4	2	19
Pneumonia (all forms)	4	3	...	...	7	9	1	20	21	26	84
Bronchitis - - -	...	...	...	...	...	1	1	3	1	1	7
Laryngitis - - -	...	...	...	...	...	...	...	...	...	...	...
Diarrhoea and Enteritis - -	1	1	1	...	3	6	4	16	8	3	40
Other Digestive Diseases - - -	...	...	...	...	...	2	1	...	1	1	5
Congenital Malformations -	11	3	...	2	16	1	1	...	2	...	20
Premature Birth - -	54	14	3	5	76	6	1	2	...	...	85
Atrophy, Debility, and Marasmus -	24	9	8	3	44	19	12	18	5	1	99
Atelectasis - - -	3	...	...	...	3	...	...	...	...	...	3
Injury at Birth - -	6	...	...	...	6	...	...	...	...	...	6
Suffocation, Overlaying - -	6	...	2	...	8	4	3	1	...	...	16
Syphilis - - -	...	1	...	...	1	...	2	1	...	...	4
Rickets - - -	...	...	...	...	...	...	...	...	...	...	...
All Other Causes - -	4	3	3	1	11	2	1	4	2	4	24
Total - - -	120	36	17	12	185	51	27	83	61	57	464

Infectious Diseases.

The ordinary infectious diseases prevailed to a greater extent in 1924 than in 1923 although the latter was also a year of unusual prevalence. The epidemic of scarlet fever which began in August, 1923, continued the whole winter and although quietening down to some extent during the summer months the epidemic re-appeared with renewed vigour in August, 1924, and continued during the whole winter 1924-25. Altogether 1,338 cases of scarlet fever were notified compared with 813 in 1923. Measles, which was epidemic in Dundee from October 1922—March, 1923 again appeared in October, 1924 and continued in epidemic form during the whole of the succeeding winter. Diphtheria also prevailed to an unusual extent during the whole year, there being 452 notifications of this disease, a much greater number than we have had any year since 1910.

The number in 1923 was 256. There was also a marked increase in the number of cases of acute primary pneumonia, acute influenzal pneumonia, and whooping cough. The Department received 3,035 notifications in terms of the Infectious Disease (Notification) Act, 1889 and of Regulations issued by the Scottish Board of Health under section 78 of the Public Health (Scotland) Act, 1897. The corresponding figures for the years 1922 and 1923 were 2,144 and 2,598 respectively.

Of the non-notifiable infectious diseases 2,795 intimations were received in 1924 and 1,513 in 1923.

The Department therefore received information regarding 5,830 cases of infectious disease last year compared with 4,111 in 1923 and 4,128 in 1922.

The death-rate from the principal epidemic diseases (enteric fever, measles, scarlet fever, whooping cough, diphtheria, and diarrhoea and enteritis) was 1.69 per 1,000 population compared with 1.17 in 1923, .80 in 1922 and 1.09 in 1921. The actual number of deaths during each of the four years was as follows:—

1921.	1922.	1923.	1924.
183	138	200	289

The total number of deaths certified as due to infectious diseases notified and intimated to the Department (as detailed in the return on page 17) was 828.

The corresponding number for 1923 was 694. The infectious diseases were therefore responsible for nearly 30% of the total deaths from all causes (2,809) or a death-rate of 4.8 per 1,000 population. As is usual most damage was done among infants and children, 453 of the deaths occurring at ages under five, representing much more than half the total deaths at that age period.

On the following pages will be found (1) a return of cases of infectious diseases notified, etc. during the year ending 31st December, 1924, arranged in age periods (2) a table showing the notifications and intimations received each month during the same period. In the succeeding pages more details are submitted regarding certain of the infections.

NUMBER OF CASES COMING TO THE KNOWLEDGE OF THE
MEDICAL OFFICER OF HEALTH.

DISEASE.	At Age—Years.									Cases removed to Hospital.	Cases not removed to Hospital.
	At all ages.	Under 1.	1 and under 5	5 and under 15	15 and under 25	25 and under 45	45 and under 65	65 and upwards			
A.—Diseases specified in the Infectious Disease (Notification) Act, 1889.											
Typhoid or Enteric Fever	21	...	3	10	5	2	1	...	18	3	
Typhus Fever	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Scarlet Fever or Scarlatina	1338	26	444	697	110	55	6	..	728	610	
Diphtheria and Membranous Croup	452	14	195	191	28	22	2	..	418	34	
Erysipelas	138	3	...	2	15	38	53	27	21	117	
Puerperal Fever	21	...	...	...	5	16	...	...	5	16	
Cholera	...	...	...	...	...	...	...	...	...	...
Relapsing Fever	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...

B.—Diseases notifiable in terms of Regulations made under Section 78 of the Public Health (Scotland) Act, 1897.

Ophthalmia											
Neonatorum	124	124	...	...	...	...	...	...	6	118	
Infective Jaundice	...	...	...	...	...	...	...	...	...	...
Malaria	4	...	...	...	1	3	...	...	1	3	
Dysentery	1	...	...	...	...	1	...	...	1	...	
Trench Fever	...	...	...	...	...	...	...	...	...	...
Acute Primary Pneumonia	433	41	135	80	66	59	38	14	198	235	
Acute Influenzal Pneumonia	66	...	3	6	15	23	15	4	11	55	
Pulmonary Tuberculosis	295	1	13	48	73	101	51	8	249	46	
Non-Pulmonary Tuberculosis	142	4	46	37	26	20	7	2	27	115	
Total of A and B	3035	213	839	1071	344	340	173	55	1683	1352	

Cases notified in a previous year and removed to Hospital for the first time during 1924:—Pulmonary Tuberculosis, 33; Non-Pulmonary Tuberculosis, 3—36.

C.—Diseases to which the Provisions of the Infectious Disease (Notification) Act have been extended by the Local Authority.

Acute Anterior Poliomyelitis	1	...	...	...	1	...	...	...	1		
Cerebro-Spinal Fever	1	...	1	...	...	...	...	...	...	1	

D.—Notified under Local Provisions not under the Infectious Disease (Notification) Act, 1889.

Measles	1828	120	918	783	6	1	...	...	120	1702	
Whooping Cough	518	65	282	165	3	2	1	...	1	517	
Chickenpox	435	15	142	273	4	1	...	...	1	434	
Encephalitis Lethargica	14	...	...	3	7	3	1	...	13	1	

Monthly Notifications of Infectious Disease, 1924.

DISEASE.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Pulmonary Tuberculosis ..	40	38	37	23	27	19	15	19	22	20	21	14	295
Non-Pulmonary Tuberculosis ..	12	14	10	15	13	11	10	14	13	9	9	12	142
Smallpox ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Typhus Fever ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever ..	2	2	...	...	1	...	3	7	3	2	1	...	21
Puerperal Fever ..	3	2	2	3	1	2	2	1	...	1	3	1	21
Diphtheria ..	34	35	36	19	40	29	41	36	36	66	42	38	452
Scarlet Fever ..	122	84	105	60	63	77	72	127	161	215	136	116	1338
Erysipelas ..	14	13	5	13	10	5	13	9	11	11	21	13	138
Cerebro-Spinal Fever ..	...	...	...	...	...	1	...	...	...	...	...	...	1
Ophthalmia Neonatorum ..	27	14	11	8	3	11	4	12	7	10	7	10	124
Pneumonia (Primary) ..	40	17	46	71	42	32	18	13	37	23	38	56	433
Pneumonia (Influenzal) ..	3	4	10	11	...	...	...	...	10	4	12	12	66
Malaria ..	...	1	...	...	...	...	...	1	1	...	...	1	4
Dysentery ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Trench Fever ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Anterior Poliomyelitis ..	...	...	...	...	1	...	...	...	...	...	...	...	1
*Anthrax ..	...	...	...	...	...	...	...	...	...	...	...	...	...
*Encephalitis Lethargica ..	...	...	...	...	3	10	...	...	...	...	...	...	14
*Measles ..	16	23	59	65	39	22	4	2	41	136	31	890	1828
*Whooping Cough ..	6	15	25	28	42	41	22	26	28	40	117	128	518
*Chickenpox ..	112	52	48	45	40	33	4	4	13	24	28	32	435
Total ..	431	314	394	361	325	293	208	271	323	521	966	1325	5832

* Not Notifiable.

Diphtheria.

The notifications of diphtheria numbered 452. With the exception of 1910, when 498 notifications were made, this number is higher than that for any annual period since notification became compulsory. The cases occurred fairly evenly throughout the year, the highest number for any month being 66 in October. The case mortality was 9.7 per cent. there being 44 deaths. The figures for each of the last 24 years are given below :—

Year.	Cases.	Deaths.	Case Mortality.
1901	143	18	12.5
1902	143	20	14.0
1903	132	15	11.3
1904	100	22	22.0
1905	143	24	16.7
1906	183	38	20.7
1907	169	30	17.7
1908	200	39	19.5
1909	303	38	12.5
1910	498	67	13.4
1911	367	37	10.0
1912	409	43	10.5
1913	265	34	12.8
1914	319	30	9.4
1915	267	32	12.0
1916	261	32	12.2
1917	328	43	13.1
1918	362	39	11.8
1919	274	24	8.7
1920	315	30	9.5
1921	274	15	5.5
1922	267	23	8.6
1923	256	34	13.3
1924	452	44	9.7

Total cases for 24 years—6,430. Total deaths—771. Case Mortality—12.0 per cent.

The serious nature of this disease and its effects particularly on children were commented on in my last annual report and need not be repeated. The increased prevalence last year serves however to emphasise the importance of diphtheria as a factor in the sickness rate and death-rate at the young ages. That it is now possible to confer immunity by artificial methods on susceptible individuals should be kept in mind by all who are responsible for the welfare of children.

On the whole the disease was rather milder in type although many cases were admitted to Hospital too late to ensure successful results from the specific treatment. From the large number of cases showing nothing more than nasal discharge or slight congestion of the throat, it would appear likely that many mild cases of the infection were unrecognised and that these along with healthy carriers were mainly responsible for the spread of the disease. There was no evidence of any person having been infected by milk.

The cases and deaths arranged in age groups are submitted below. The marked incidence and fatality at the early ages are evident.

				Cases.	Deaths.
Under 1 year	...	...	...	14	0
1- 5 years	...	...	...	195	29
5-15 "	...	...	...	191	14
15-25 "	...	...	...	28	1
25-45 "	...	...	...	22	0
45-65 "	...	...	...	2	0
65 and upwards	...	...	...	0	0

Scarlet Fever.

There were 1,338 notifications during the year compared with 813 in 1923. This is the largest number of notifications of scarlet fever received any year since 1889. An epidemic began in August, 1923 and lasting the whole winter it quietened down during the summer months of 1924. It again assumed epidemic form in the autumn of last year and continued during the whole of the winter 1924-25.

Not only was the epidemic a very extensive one but it would seem to have been more virulent than usual. A careful study of the whole circumstances would be necessary before stating a definite conclusion, but it may be recorded here that during 1924, of the 1,338 cases 43 died, giving a case mortality of 3.2 per cent. The case mortality for the last 10 years was 2.14 per cent. The 1924 rate is higher than it has been since 1914, also an epidemic year when the case mortality was 3.5 per cent.

The notifications and deaths for each of the last 10 years were as follows :—

			Notifications.	Deaths.
1915	...	...	1,173	21
1916	...	...	452	11
1917	...	...	195	3
1918	...	...	87	1
1919	...	...	410	4
1920	...	...	424	6
1921	...	...	380	12
1922	...	...	429	7
1923	...	...	813	14
1924	...	...	1,338	43
Total for 10 years			5,701	122
Case Mortality for 10 years			...	2.14%

The following table shows the number of cases and deaths during 1924, arranged in age periods :—

			Notifications.	Deaths.
Under 1 year	...	...	26	2
1 year and under 5	...	...	444	31
5 years	"	15	697	10
15	"	25	110	0
25	"	45	55	0
45	"	65	6	0
65 and upwards	...	...	0	0
			1,338	43

728 cases were removed to King's Cross Hospital for treatment, 610 being treated in their own homes. That means that 54 per cent. of the total notified cases were isolated in Hospital. Those isolated at home were kept under observation by the staff of the Department and records kept. This form of isolation appears to have been quite successful. The whole epidemic has provided plenty material for study and it is hoped that time will be found at a later date to examine more carefully the information collected.

Enteric Fever.

The Department received 21 notifications of this disease. Of these 5 proved not to be suffering from the infection. The final diagnoses in these 5 cases were abdominal tuberculosis (1), pediculosis (1), gastro-enteritis (2), and in one case no diagnosis was made. The 16 cases were all proved by laboratory methods to be suffering from typhoid fever.

There was one death.

Of the 21 notified cases 18 were removed to Hospital, the home circumstance in the remaining 3 (2 typhoid; 1 no diagnosis) being considered quite suitable for proper isolation.

The source of infection was not definitely ascertained in any case, but in several the evidence pointed to the disease having been contracted outside Dundee, and in two cases, the circumstances suggested that a woman who had suffered from the disease some years ago was a carrier. No bacteriological evidence could however be obtained in support of this view.

The number of cases, the number of deaths and the case mortality each year since 1901 are shown below :—

Year.	Cases.	Deaths.	Percentage. Case Mortality.
1901	76	10	13.1
1902	51	11	21.5
1903	180	32	17.7
1904	206	21	10.2
1905	62	10	16.1
1906	78	13	16.6
1907	48	6	12.5
1908	39	3	7.7
1909	34	4	11.7
1910	69	5	7.2
1911	30	2	6.6
1912	26	2	7.7
1913	42	7	16.7
1914	79	6	7.7
1915	131	14	10.7
1916	63	8	12.7
1917	26	1	3.8
1918	26	5	19.2
1919	103	7	6.8
1920	30	4	13.3
1921	7	1	14.3
1922	6	0	0
1923	19	2	10.5
1924	16	1	6.2

Total for 24 years—1,447 cases. 175 deaths—
case mortality 12.09 per cent.

Influenza.

Influenza was the certified cause of 39 deaths. The following table shows the number of cases in which influenza was given as a cause during each month for the last seven years.

	1918	1919	1920	1921	1922	1923	1924
January	1	31	4	5	73	2	0
February	0	58	0	6	19	0	2
March	0	40	4	8	3	0	7
April	1	8	55	4	1	2	8
May	0	3	24	2	1	1	2
June	0	0	0	0	0	1	1
July	35	1	1	0	0	0	0
August	3	0	0	0	0	0	0
September	0	0	0	1	0	1	3
October	59	0	2	0	1	0	0
November	235	2	0	2	4	1	10
December	113	0	0	5	1	4	6
Totals	447	143	90	33	103	12	39

The majority of last year's deaths occurred in the winter months and 35 of the 39 occurred at adult ages, as is shown below :—

Under 1 year	...	...	...	...	...	1
1- 5 years	...	...	...	...	...	1
5-15	„	...	...	...	...	1
15-25	„	...	...	...	...	1
25-45	„	...	...	...	...	8
45-65	„	...	...	...	...	12
65 and upwards	...	...	...	...	...	15
						—
						39

Nine of the deaths were of persons over 75 years of age.

Of the total, 11 deaths were certified as being due to influenza alone, while in 28 cases that disease was associated with

Bronchitis	...	...	...	...	...	4
Pneumonia	...	...	...	...	...	17
Other respiratory diseases	...	...	...	...	...	2
Other causes	...	...	...	...	...	5
						—
						28

Pneumonia.

The following pneumonia notifications were received during each of the last 5 years :—

	1920	1921	1922	1923	1924
Acute Primary Pneumonia	257	127	348	297	433
„ Influenzal „	222	12	154	13	66
	479	139	502	310	499

Last year was therefore a fairly severe one in regard to this particular disease. It appeared to prevail at all seasons of the year, the largest number of cases, 82 occurring in April. The cold and wet weather was no doubt a very important predisposing cause.

All ages were affected, but 256 of the cases, that is more than half, were children under 15 years of age and 176 were children under 5 years.

The number of deaths certified as due to pneumonia during each of the 5 years 1920-24 was 415, 200, 262, 231, 314. Last year's figure was therefore a very high one, coming next to that for 1920, the highest during the period. With 499 cases the case mortality would be 63 per cent., obviously an unreliable figure. Pneumonia was, as is usual, particularly fatal to young and old people. This is evident from the following table.

Age period.	Deaths.
0-5 years	160
5-15 „	6
15-25 „	11
25-45 „	30
45-65 „	58
65 and upwards	49
	<hr/> 314

Over 200 of the cases received institutional treatment, practically all of these being admitted to the medical wards of the Royal Infirmary.

Dysentery.

1 case of dysentery was notified during the year. The patient was an adult infected abroad.

No special action was required.

Trench Fever and Malaria.

No cases of the former were notified.

There were 4 cases of malaria, the disease being contracted abroad in every case.

Measles.

During 1924, 1,828 intimations of this disease were received and of these 1,557 occurred during the last quarter. An outbreak commenced in October and continued during the whole winter. An epidemic of measles occurred during the winter 1922-23 ending in March of the latter year, so that the interval between the two epidemics was 18 months.

There were 116 deaths, all except 3 being children under 5 years. The following table classifies the 1924 intimations and deaths in age-periods. The terrible effect among infants and children is very obvious.

			Cases.	Deaths.
Under 1 year	...	...	120	22
1- 5 years	...	...	918	91
5-15	„	...	783	3
15-25	„	...	6	0
25-45	„	...	1	0
			<hr/> 1,828	<hr/> 116

The case mortality calculated from these figures is 6.3 per cent. at all ages, 18.3 per cent. at ages under 1 year, and 10 per cent. at ages from 1 to 5 years. At all ages under five, the case-mortality was 11 per cent. Although these figures may be rather higher than the true figures, they are sufficient to emphasise how serious a disease measles can be. At ages from 1-5 years, it caused more deaths than any other single cause.

During 1924, 126 cases were admitted to King's Cross Hospital for treatment. That number represents about 7 per cent. of the known cases. Later in the outbreak, during the first month or two of the present year, we were able to admit a slightly larger proportion of cases but not by any means all those requiring institutional treatment. The extensive prevalence of scarlet fever coinciding with the measles outbreak made the question of hospital accommodation a very difficult one.

The health visitors of the Child Welfare Department paid 2,738 visits to the homes of measles cases, 1,687 being initial visits and 1,051 revisits. A much larger number of visits was possible because the Local Authority authorised the temporary appointment of two nurses who were employed whole time in visiting home-treated cases.

Whooping Cough.

The Department was informed of 518 cases of whooping cough compared with 374 in 1923. The disease was present throughout the whole year, the last quarter showing an increased number of cases. There were 35 deaths, 16 at ages under 1 year and 19 from 1-5 years. Like measles, this disease is very destructive of infant and child life.

Only one case was removed to Hospital for treatment. The health visitors paid 723 visits to the homes of patients. Of these 494 were initial visits and 229 revisits. The epidemic prevalence of measles and scarlet fever made it quite impossible to set aside any beds in King's Cross Hospital for the use of whooping cough patients.

Smallpox and Typhus Fever.

No cases of the above diseases were notified.

Chickenpox.

Information reached the Department of 435 cases of chickenpox.

Erysipelas.

Notifications numbered 138 and there were 7 deaths. These are given below in age groups.

			Cases.	Deaths.
Under 1 year	...	...	3	2
1- 5 years	...	...	0	0
5-15	"	...	2	1
15-25	"	...	15	1
25-45	"	...	38	0
45-65	"	...	53	2
65 and upwards	...	...	27	1
			<hr/> 138	<hr/> 7

21 cases received treatment in Hospital.

Cerebro-Spinal Meningitis.

There was one case of this disease.

Puerperal Fever and Ophthalmia Neonatorum.

For convenience these diseases are considered later in the report under the heading of Maternal and Child Welfare.

Infantile Diarrhoea.

There were 50 deaths certified as due to diarrhoea and enteritis at ages under 2 years. Of these 40 were of infants under 1 year.

The deaths from this disease each year since 1919 were—

		Under 1 year.	1-2 years.	Total.
1919	...	35	5	40
1920	...	95	7	102
1921	...	63	12	75
1922	...	36	8	44
1923	...	14	2	16
1924	...	40	10	50

There was a slight increase in the number of deaths last year, but it is still far below the old figures. This disease is very largely responsible for the lowered infantile mortality which has occurred within recent years. Its control depends mainly on the question of infant feeding.

Public Health (Infectious Diseases Carriers) Regulations (Scotland) 1921.

A large number of bacteriological examinations were performed among diphtheria contacts and while a certain number were found to have positive throats, none proved to be permanent carriers.

A few examinations were also carried out for the detection of typhoid carriers. The results were negative in all cases.

Tuberculosis.

No developments requiring special note occurred during the year. The observations made in my last report in regard to the premises in Tally Street at present in use as a Dispensary and to the necessity for a

new institution need not be emphasised. Proposals will be placed before the Town Council during the present year for the establishment of a new building in Salem Street which will accommodate not only the Tuberculosis Dispensary but also the Venereal Diseases Treatment Centres. The situation at Salem Street is an excellent one for a Dispensary owing to its central situation and proximity to the Royal Infirmary.

The necessity for more indoor accommodation for tuberculosis cases is still very acute. Proposals on this subject will also be submitted to the Town Council during the present year.

The year's work under the Scheme is given in detail by Dr. Hunter in his report (page 87). The fact that 138 of the 437 new cases of tuberculosis were discovered at the Dispensary testifies to the usefulness of that Institution. The attendances showed a slight fall, the number for 1924 being 18,574 and for 1923, 19,248. As pointed out in my last report the number of attendances may easily become too high for efficient work and the lower figure last year is all to the good. A very satisfactory feature of last year's work is the increase in the number of contacts examined from 108 to 159. Even the new figure represents a very small proportion of the total number who must have been exposed to infection from known cases of the disease.

NOTIFICATIONS.

The number of notifications for the year 1924 was 437, the corresponding number for 1923 being 525, a decrease of 88. The 1924 figure is the lowest recorded since notification became compulsory, and although these numbers cannot be considered as a very reliable guide, there would seem to be a real, though probably slight, diminution in the prevalence of tuberculosis, as there certainly is a fall in the death-rate from the disease. The number of cases unnotified at time of death was 48, a rather higher figure than usual.

The notification rates for the last 10 years are as follows:

YEAR.	Estimated Population.	Pulmonary Tuberculosis	Attack-rate per 1000 of Population.	Non-Pul- monary Tuberculosis	Attack-rate per 1000 of Population.	All Forms of Tuberculosis	Attack-rate per 1000 of Population.
1915	177,300	485	2.73	377	2.12	862	4.86
1916	181,437	522	2.87	213	1.17	735	4.05
1917	181,773	432	2.37	171	.94	603	3.36
1918	181,777	393	2.16	201	1.11	594	3.26
1919	185,388	442	2.38	137	.73	579	3.12
1920	184,084	423	2.29	132	.71	555	3.01
1921	168,217	375	2.23	99	.58	474	2.81
1922	172,061	401	2.33	162	.94	563	3.27
1923	170,901	309	1.80	216	1.26	525	3.07
1924	171,295	295	1.72	142	.83	437	2.55

The notification rate for the pulmonary form is by far the lowest yet recorded and the non-pulmonary rate is the second lowest.

Notification rate in age groups 1917-24—pulmonary tuberculosis.

Ages.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
0-5 years	.81	1.27	.64	.67	1.43	.99	1.34	.93
5-15 "	1.52	1.55	1.92	2.05	1.81	2.05	1.56	1.50
15-45 "	3.22	2.70	3.25	2.8	2.9	2.99	2.13	2.19
45-65 "	2.58	2.52	2.02	2.4	1.62	2.10	1.74	1.47
65 and upwards	.71	.40	1.10	.84	.77	.76	.95	.76
	2.37	2.16	2.33	2.29	2.22	2.33	1.80	1.72

Notifications of pulmonary tuberculosis—males and females—1915-24.

	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
Males	216	227	181	198	238	223	197	170	149	135
Females	269	295	251	195	204	200	178	231	160	160
	485	522	432	393	442	423	375	401	309	295

Notification rate in age groups 1917-24—non-pulmonary tuberculosis.

	1917.	1918.	1919.	1920.	1921.	1922.	1923.	1924.
0-5 years	2.75	2.54	1.79	2.3	1.5	3.26	3.35	3.34
5-15 "	1.25	1.52	1.01	1.05	1.46	1.68	2.19	1.15
15-45 "	.75	.90	.58	.49	.31	.65	.99	.57
45-65 "	.19	.42	.32	.16	.14	.66	.34	.20
65 and upwards	.10	.50	.30	—	.19	—	.47	.19
	.94	1.10	.74	.71	.58	.94	1.26	.83

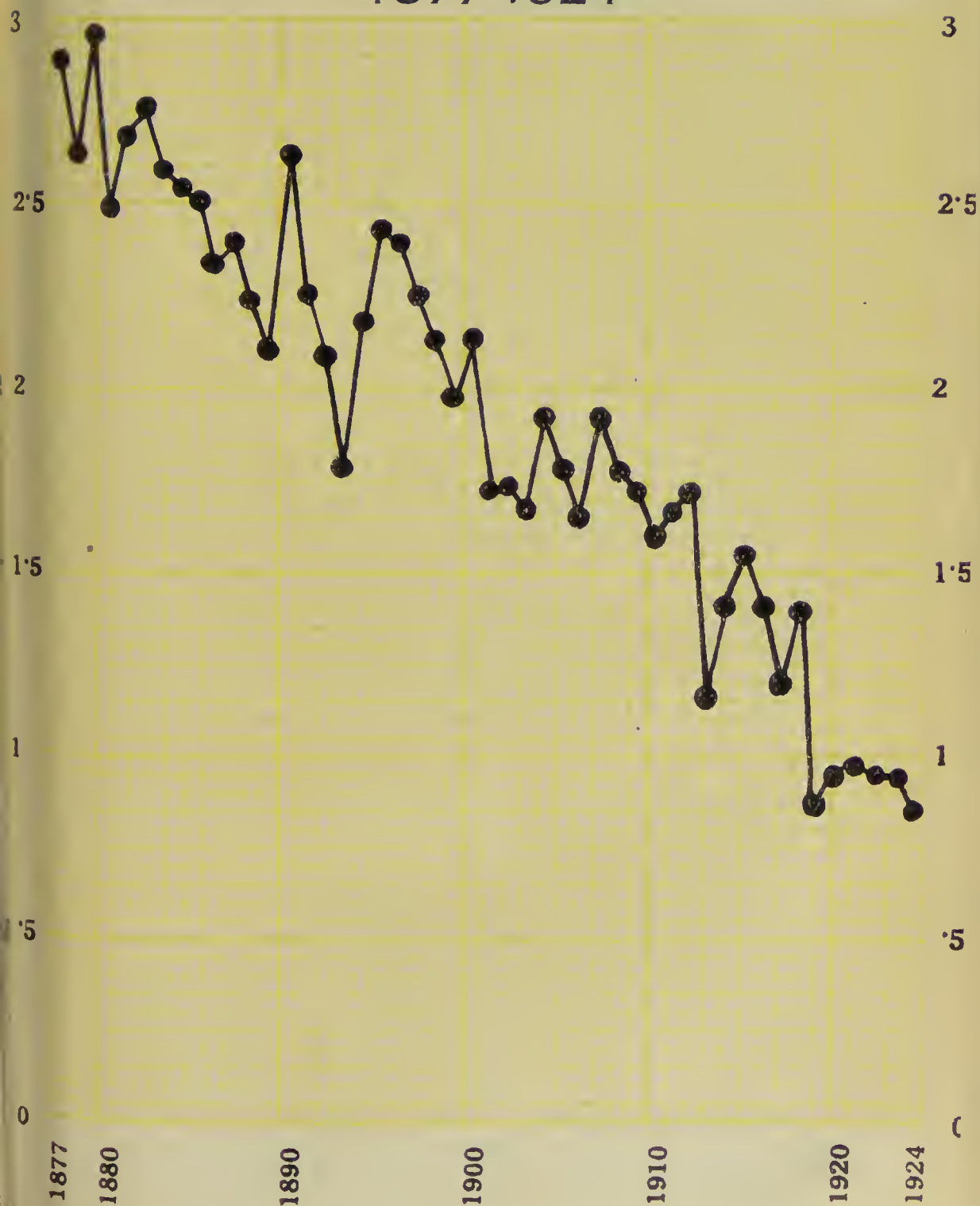
All ages show a very marked fall except at those under 5 years.

CITY OF DUNDEE

PULMONARY TUBERCULOSIS.

DEATH RATE per 1000 Population.

1877-1924



The following table shows the notifications of pulmonary and non-pulmonary tuberculosis in the various wards in the city and also the corresponding and combined attack-rate.

WARDS.	Pulmonary Tuberculosis	Attack rate per 1000 of population.	Non-Pulmonary Tuberculosis.	Attack rate per 1000 of population.	Pulmonary and Non-Pulmonary Tuberculosis.	Pulmonary & Non-Pulmonary Tuberculosis. — Attack rate per 1000.
1	28	1.92	10	.69	38	2.61
2	22	1.78	9	.73	31	2.51
3	25	1.51	16	.97	41	2.48
4	22	1.14	12	.62	34	1.76
5	41	1.79	20	.87	61	2.66
6	32	1.82	21	1.19	53	3.01
7	27	1.51	20	1.12	47	2.63
8	48	2.55	18	.96	66	3.51
9	37	1.81	12	.59	49	2.40
10 & 11	13	1.19	4	.37	17	1.56
TOTAL	295	1.72	142	.83	437	2.55

Ward 8 shows the highest figure with Ward 6 making a good second. These, along with Wards 1, 5 and 7, have rates above that for the whole city.

Deaths from Tuberculosis.

The death-rates for last year were very satisfactory. The pulmonary tuberculosis death-rate was the lowest ever recorded while the death-rate from non-pulmonary forms of the disease was the second lowest.

The rates for the last 10 years are given below and the chart on the opposite page shows the death-rates from pulmonary tuberculosis since 1877.

YEAR.	Estimated Population.	Pulmonary Tuberculosis.	Death-rate per 1000 of Population.	Non-Pulmonary Tuberculosis.	Death-rate per 1000 of Population.	Total Deaths from Tuberculosis.	Death-rates per 1000 of Population.
1915	177,300	275	1.55	113	.64	388	2.19
1916	181,437	259	1.42	95	.52	354	1.95
1917	181,773	218	1.20	110	.77	358	1.97
1918	181,777	256	1.40	90	.49	346	1.90
1919	185,388	165	.89	83	.44	248	1.33
1920	184,084	183	.99	69	.38	252	1.37
1921	168,217	168	.99	59	.35	227	1.34
1922	172,061	168	.98	67	.39	235	1.37
1923	170,901	167	.98	78	.45	245	1.43
1924	171,295	146	.85	65	.38	211	1.23

The death-rate from pulmonary tuberculosis was much lower for females than for males. Until last year the female rate slowly but steadily increased for some 5 years, but the 1924 figure shows a very marked drop.

Pulmonary Tuberculosis—deaths and death-rates (male and female) 1915-24 :—

Year.	MALES.		FEMALES.	
	Deaths.	Rate per 1000.	Deaths.	Rate per 1000.
1915	106	1.35	169	1.71
1916	99	1.23	160	1.58
1917	100	1.24	118	1.16
1918	117	1.45	139	1.37
1919	90	1.09	75	.72
1920	95	1.16	88	.85
1921	81	1.08	87	.92
1922	75	.98	93	.97
1923	73	.96	94	.98
1924	75	.98	71	.74

The two following tables give the deaths and death-rates from pulmonary tuberculosis and non-pulmonary tuberculosis respectively, arranged in groups according to age. The highest rate for pulmonary tuberculosis was again at the age-period 15-25. For non-pulmonary tuberculosis, the rate was as usual highest at ages 0-5 years.

Deaths from pulmonary tuberculosis in age periods, 1924 :—

Age Periods.	No. of Deaths.	Rate per 1,000.
0- 5 years ...	1	.06
5-15 „ ...	8	.25
15-25 „ ...	44	1.36
25-45 „ ...	55	1.17
45-65 „ ...	33	.96
65 and upwards ...	5	.47
	146	.85

Deaths from non-pulmonary tuberculosis in age periods, 1924 :—

Age Periods.	No. of Deaths.	Rate per 1,000.
0-5 years ...	28	1.87
5-15 " ...	14	.44
15-25 " ...	9	.28
25-45 " ...	6	.13
45-65 " ...	7	.20
65 and upwards ...	1	.09
	<hr/> 65	<hr/> .38

The following table shows the death-rates from tuberculosis in the various wards of the city last year. Ward 6 shows the highest rate for all forms of tuberculosis and Wards 10 and 11 the lowest.

WARD.	Pulmonary Tuberculosis	Death-rate per 1000.	Non-Pulmonary Tuberculosis	Death-rate per 1000.	Total deaths from all forms of Tuberculosis	Death-rate per 1000.
1	19	1.3	3	.20	22	1.51
2	7	.56	3	.24	10	.80
3	9	.54	13	.79	22	1.33
4	18	.92	5	.26	23	1.18
5	15	.65	9	.39	24	1.04
6	20	1.13	9	.51	29	1.64
7	18	1.00	7	.39	25	1.40
8	18	.95	10	.53	28	1.48
9	18	.88	4	.19	22	1.07
10 and 11 No fixed abode.	5	.45	1	.09	6	.54
	0	0	1	0	1	.0
Total	147	.85	65	.38	212	1.23

(N.B. Register General—146 Pulmonary and 211 all Forms).

Of the 147 deaths from pulmonary tuberculosis 62 (42.1 per cent.) occurred in institutions. The figures for the years 1915-1924 are as follows :—

	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
Total Deaths from Pulmon. T.B.	275	259	218	256	165	183	168	168	167	147
No. of Deaths from Pulmon. T.B. in Institutions	25	66	64	98	67	93	91	85	75	62
Percentage of Total Deaths from Pulmon. T.B. Dying in Institutions	9.09	25.52	29.35	38.28	40.6	50.8	54.1	50.6	44.9	42.1

The report of Dr. Hunter, Chief Tuberculosis Medical Officer will be found on page 87.

Venereal Diseases.

The position of the Dundee Venereal Diseases Scheme is exactly as described in last year's report. At the time of writing, the ad hoc Centre in Fleuchar Street has been in operation for some 20 months and has been an undoubted success. The accommodation provided is not too good, and the situation is anything but satisfactory. Nevertheless, the experiment has succeeded and the Local Authority need have no hesitation in proceeding with a permanent ad hoc venereal diseases treatment centre. The clinic at Fleuchar Street was on trial for a period of two years, the whole question to be reconsidered at the end of that time. The two years will end in November next and during the present year, the Local Authority will consider the erection of new premises on the ground at Salem Street, Constitution Road. This site is an excellent one for the purpose, being very central and quite near the Royal Infirmary. The proposal is to provide in one building a tuberculosis dispensary, a venereal diseases centre for male patients, a venereal diseases centre for female patients and a ward for the indoor treatment of male venereal diseases patients. The centre for female patients is still at the out-patient department of the Royal Infirmary where a tremendous amount of work is being done under very inadequate conditions.

The Dundee Venereal Diseases Scheme has had a chequered career, and it is to be hoped that its future will be settled for good before another annual report is due to appear. Changes in premises, personnel and hours of consultation all interfere with efficiency, and these changes have been far too frequent. The Local Authority have had demonstrated to them the possibilities of the ad hoc centre, and I hope will now agree to the establishment of a permanent institution of this nature.

The new visits and attendances at the centres during the year were very satisfactory, the figures which are submitted in detail in Dr. Averill's report showing a considerable improvement on the preceding year. Form V.R.1. for the year ended 15th May, 1925, contains very useful information regarding patients who

ceased to attend the Centres during that period. The following table shows an analysis of the figures relating to these patients :—

	Both Sexes.		Males.		Females.	
	No.	Percentage.	No.	Percentage.	No.	Percentage
Left before completing a course of treatment,	179	28%	73	20%	106	39%
Left after completing a course of treatment, but before final tests as to cure,	119	19%	42	11%	77	29%
Transferred to other centres.	79	12%	57	15%	22	8%
Discharged from centre after completion of treatment,	263	41%	198	54%	65	24%
Total,	640	100%	370	100%	270	100%

According to this table, 47 per cent. of the patients of both sexes who ceased to attend the Centres did so without the consent of the Special Medical Officers. The percentage for the year 15th May, 1924, was 63 so that the improvement may be represented by the differences between these two figures, namely, 16 per cent., quite a satisfactory advance. Nevertheless, 47 per cent. is still too high and given satisfactory premises, I am convinced, will be improved on. For males, the figure was 31 per cent., and for females 68 per cent., compared with 53 per cent. and 91 per cent. respectively for the preceding year. On the male side, 54 per cent. and on the female side, 24 per cent. of the patients who ceased attending, did so after completing the prescribed treatment and with the approval of the medical officers. For both sexes, the figure was 41 per cent. compared with 24 per cent. for the year before. It would therefore appear that the ad hoc male centre is the more satisfactory of the two, although it is admitted that the differences between the figures applicable to the sexes cannot be accounted for entirely by the nature of the respective centres.

Arseno-benzol Compounds :— Altogether 4,666 doses of approved arseno-benzol compounds were issued from this office during 1924. The figures for each of the last six years are as follows :—

		Treatment Centre.	Other Institutions.	Medical Practitioners.	Total.
1919	...	1,958	13	141	2,112
1920	...	6,362	18	472	6,852
1921	...	6,280	239	358	6,877
1922	...	5,135	239	239	5,613
1923	...	5,224	198	123	5,545
1924	...	3,887	275	504	4,666

The total for 1924 shows a fall of nearly a thousand on the 1923 figure, a natural result of the smaller number of cases of syphilis which received treatment during the year, for although the total new cases and attendances show an increase, this is due entirely to gonorrhœa, there being a marked rise in the number of cases of this disease under treatment at the Municipal Centres with a definite fall in the number of syphilis cases. It is satisfactory to note the very large increase in the number of doses supplied to medical practitioners if it can be interpreted as meaning greater interest in the control of the disease.

Laboratory Work—The following examinations were carried out under the scheme during each of the last six years :—

	1919	1920	1921	1922	1923	1924
Wassermann Tests	1301	3019	4084	3573	3418	3261
Microscopical and other examinations	691	900	870	610	1555	1657
	1992	3919	4954	4183	4973	4918

The very slight drop in the total is due to the smaller number of Wasserman tests. Of the total 551 were carried out on behalf of private medical practitioners, this figure being slightly larger than that for 1923.

Deaths from Syphilis :—There were 10 deaths certified as due to syphilis. Of these 7 were males and 3 were females. Four occurred at ages under one year and 6 at ages over 25 years.

I append a table which shows the deaths which may be considered as having been caused by syphilis.

	Total Deaths.	Deaths probably due to Syphilis.
Syphilis	10	10
General paralysis of insane	7	7
Locomotor ataxy	6	6
Aneurism	5	5
Premature birth	89	44
Abortion, Miscarriage	0	0
Congenital debility, Icterus, Sclerema	87	43
Other diseases of spinal cord	13	6
Angina pectoris	2	1
Cerebral hæmorrhage	13	6
Apoplexy	1	0
Hemiplegia	2	1
	<hr/> 235	<hr/> 129

The total number of deaths at all ages and from all causes in Dundee last year was 2,809, so that syphilis would seem to have been responsible for 4.5 per cent. of that number.

Dr. Averill's report will be found on page 119, and a report by Dr. Andrewina Laird on the Special Child Welfare Venereal Diseases Centre on page 116. The attendances at this Centre show a very satisfactory increase although there was a fall in the number of new cases.

The Public Health (Port Administration Infectious Diseases) Regulations (Scotland), 1921.

The work under the above Regulations was carried on as usual during the year. The following table shows the amount of shipping entering the Port in 1924.

	Number.	Tonnage.	Number Inspected by the		Number reported to be defective.	Number of Notices issued.
			Medical Officer of Health.	Sanitary In- spectors.		
FOREIGN—						
Steamers	326	527,188	10	326	—	—
Motor	4	5,527	—	4	—	—
Sailing	5	1,337	—	5	—	—
Fishing	—	—	—	—	—	—
	<hr/> 335	<hr/> 534,052	<hr/> 10	<hr/> 335	<hr/> —	<hr/> 787
COAST-WISE—						
Steamers						
Motor						
Sailing						
Fishing						
	<hr/> 802	<hr/> —	<hr/> —	<hr/> —	<hr/> —	<hr/> —

The following are the principal foreign places from which ships arrived, with notes of the usual imports.

India (Calcutta, Chittagong, Bombay)	69	Jute, Gunnies, and Linseed.
Hamburg	48	Sugar, Potash, Farina.
Dunkirk	9	Sugar, General Cargo.
Rotterdam	24	Sugar, Milk, Cheese, Steel Plates.
Antwerp	17	Do.
Ghent	8	Do.
Göthenburg	17	Paper, Timber.
Algeria	8	Esparto Grass.
U.S.A. and Canada	24	Flour, Sugar, Tinned Foods, Cattle.
Baltic Ports, Norway, Sweden, &c. ...	111	Timber, Flax, Granite, Tar.

Only one case of illness on board ship required removal to the Infectious Diseases Hospital, the patient being a native seamen, suffering from pulmonary tuberculosis. The provision for hospital treatment, disinfection, cleansing of verminous persons proved satisfactory.

During the Rat Week in March, 143 rats (one black and 142 brown) were destroyed, 11 on board ship and the remainder in various premises at the docks. No doubt many others were destroyed but we have no records. As explained by the Chief Sanitary Inspector in his report, 141 notices in regard to rats were issued and rat guards or tar and canvas recommended to be placed on the mooring ropes, while the advisability of using traps on board was brought to the notice of the masters. The fumigation of ships with a view to rat destruction was found to be a frequent occurrence, the work being done on the instruction of the owners.

The following Table contains information regarding the nature and volume of the preventive work done at the Port.

Total number of verbal intimations	643
Total Number of special rat instructions issued	141
Total number of visits to ships	795
Total number of forecastles disinfected for tuberculosis	1
Bedding and Clothing removed to King's Cross Hospital for disinfection	1
Total number of ships from infected or suspected ports	95
Do. Do. (direct)	26
Do. Do. (indirect)	69
Total number of nuisances or defects attended to	303
Forecastles cleaned out	70
Forecastles repainted	6
Forecastle walls and ceilings washed down	19
Mess-rooms cleaned	7
Galleys and store-rooms cleaned	36
Waste-food causing a nuisance	18
Water-closets choked and repaired	12
Water-closets cleaned out, 80; repainted, 14	94
Fresh water tanks cleaned out and repaired	12
Accumulation of refuse on deck	10
Discharge of foul water on quay	4
Dirty and broken baths	11
Dirty bedding	3
Bugs in forecastles	1

Hospital Accommodation.

The number of beds in the various Institutions included in or affiliated to the Public Health Department remains the same as at the end of the year 1923. King's Cross Hospital had an exceedingly busy year, owing mainly to a continuance in more severe form of the epidemic of scarlet fever which began in the autumn of 1923. The admissions totalled 1,453, the highest number for any year since the Institution was built. The next highest occurred in 1915, with 1,223 admissions. The Local Authority agreed to my suggestion contained in my last annual report that a senior resident medical officer should be appointed to undertake the main responsibility of the clinical work and Dr. William McKie took up duty on 1st August, 1924. Early in the present year the night nurses' Home, a spiresque building, was extended, some 12 rooms being added to the original structure.

The Smallpox Hospital and the Reception House were not in use during the year.

Bacteriological Laboratory.

The following table outlines the work done on behalf of the Department by Professor Tulloch at the University College, Dundee :—

	1919	1920	1921	1922	1923	1924
Wassermann tests	1301	3019	4084	3573	3418	3261
Microscopical and other examinations under V.D. Scheme for—						
Syphilis	47	163	208	125	91	68
Gonorrhœa	644	827	662	485	935	1589
Swabs for diphtheria	125	429	470	569	848	1188
Widal tests for enteric fever	185	55	52	65	126	158
Sputum examinations	48	127	280	303	317	334
Examination of fæces, &c., for—						
Enteric fever	163	118	47	24	62	64
Dysentery	0	21	4	3	2	0
Infantile diarrhœa	0	38	5	5	7	11
Special examinations	0	23	50	14	66	96
Totals	2513	4820	5862	5166	5872	6769

Besides the above a large number of examinations were carried out in connection with a food poisoning outbreak which occurred in the city in August. The total examinations show a very marked increase over previous years due mainly to the increased volume of work under the Venereal Diseases Scheme and to the unusual number of cases of diphtheria.

Professor W. J. Tulloch's report will be found on page 133.

Disinfection.

The table submitted below details the year's work in regard to disinfection.

MONTH.	Beds.	Mattresses.	Rugs.	Blankets	Sheets.	Wearing Apparel.	Miscellaneous Articles.	Total No. of Articles.	No. of Houses from which clothes were removed.
January ...	2	19	337	513	308	768	957	2,904	167
February ...	11	16	272	404	255	767	725	2,450	131
March ...	6	11	294	352	261	629	562	2,115	129
April ...	14	18	233	324	217	560	610	1,976	107
May ...	5	9	277	245	220	585	837	2,178	108
June ...	6	6	172	226	171	376	505	1,462	82
July ...	51	8	167	196	203	458	624	1,707	76
August ...	2	4	219	342	160	368	460	1,555	105
September ...	4	31	209	339	177	372	537	1,669	96
October ...	229	7	270	619	255	536	679	2,595	128
November ...	7	13	364	339	342	870	888	2,823	191
December ...	11	36	336	387	343	1,072	1,144	3,329	215
	348	178	3,150	4,286	2,912	7,361	8,528	26,763	1,535

The following figures relate to the articles disinfected and the houses concerned during each of the last five years :—

		1920.	1921.	1922.	1923.	1924.
Articles	... ..	20,917	18,078	17,480	20,074	26,763
Houses concerned	...	1,204	1,103	1,025	1,322	1,535

The marked increase in the numbers is accounted for by the unusual prevalence of epidemic disease.

Verminous Persons and Houses.

During the year 38 houses were disinfected for vermin and 8 persons, belonging to 2 different families, received cleansing baths and had their body clothing disinfected at King's Cross Hospital. A total of 142 visits were paid by the inspectors to verminous houses.

The co-operation between the Medical Department of the Education Authority and this Department was continued during the year. Dr. Kidd, the Chief Medical Officer, sent information regarding some 13 verminous school children residing in 7 houses. Two of these children were reported on three occasions and one of them twice during the year. The houses involved were inspected and action taken as indicated by the circumstances, some 51 visits being necessary for this purpose. Dr. Kidd was informed of the action in each case, and he is, I believe, well satisfied with the results of our combined efforts.

Malignant Diseases.

The number of deaths from cancer during the year was 270—103 males and 167 females. The majority of these deaths were of persons over 45 years of age, only 23 occurring at earlier ages.

The deaths from cancer during the last five years were as follows :—

Year.	Males.	Females.	Total.
1920 ...	89	127	216
1921 ...	113	176	289
1922 ...	104	168	272
1923 ...	115	146	261
1924 ...	103	167	270

The death-rate per 10,000 persons above the age of 20 since the year 1877, arranged in quinquennia, were :

Year.	Males.	Females.	Total.
1877-1881	4.98	9.25	7.27
1882-1886	5.45	11.46	8.77
1887-1891	9.83	13.87	12.24
1892-1896	11.27	15.27	13.65
1897-1901	14.02	18.90	16.92
1902-1906	14.99	19.91	17.84
1907-1911	15.16	16.71	17.24
1912-1916	16.71	23.48	20.57
1917-1921	19.44	24.31	21.67
1922 ...	23.25	26.57	25.19
1923 ...	25.85	23.24	24.32
1924 ...	22.71	26.58	24.96

The accompanying table shows the sex and ages of the fatal cases, as well as parts of the body affected :—

Ages.	Stomach and Oesophagus.	Liver.	Bowel.	Rectum.	Generative Organs.	Breast.	Jaw.	Throat.	lung.	Bladder.	Other parts.	Not specified.	Totals.
Under 20 { M. ... F. ...	...	...	...	...	...	...	...	...	...	...	...	...	0 } 2 2 }
20—25 { M. ... F. ...	...	...	...	...	1	...	...	...	...	...	1	...	0 } 2 2 }
25—35 { M. ... F. 1	...	...	...	1	1	...	...	...	...	...	...	2	2 } 5 3 }
35—45 { M. ... F. 1	...	...	1	1	3	1	...	...	1	1	2	...	5 } 14 9 }
45—55 { M. 9 F. 4	3	3	1	3	...	...	1	...	1	1	1	...	20 } 51 31 }
55—65 { M. 18 F. 17	2	4	1	4	...	11	1	...	3	1	1	...	31 } 94 63 }
65—75 { M. 7 F. 13	6	1	...	9	...	2	1	...	...	2	6	...	31 } 68 37 }
75 and up'ds. { M. 6 F. 7	...	...	1	2	...	...	...	...	1	3	1	...	14 } 34 20 }
Total ...	83	19	7	52	24	23	5	1	6	18	27	5	270

Maternal and Child Welfare.

Infantile mortality has been dealt with very fully in an earlier section of this report.

CHILD DEATHS :—At ages over one and under five years there were 333 deaths, an increase of 58 on the previous year. This increase was due entirely to the greater prevalence of the infectious diseases. The numbers of deaths at this age period from certain of the infectious diseases during each of the last three years are submitted below :—

	Measles.	Whooping Cough.	Scarlet Fever.	Diphtheria.
1922	30	9	4	19
1923	65	25	11	25
1924	91	19	31	29

There was, however, a smaller number of deaths from tuberculosis.

MATERNAL MORTALITY :—The following table gives the certified causes of deaths of women from diseases and accidents connected with pregnancy and childbirth for each of the five years, 1920-24.

	1920	1921	1922	1923	1924
Abortion, Miscarriage	4	0	1	0	0
Uncontrolled vomiting	0	0	0	0	0
Ectopic gestation	1	0	0	0	0
Other diseases and accidents of pregnancy ...	1	1	2	1	0
Puerperal hæmorrhage	0	3	5	2	4
Other accidents to parturition	5	2	0	2	2
Puerperal sepsis	9	9	22	6	3
Phlegmasia alba dolens, Embolism	1	1	1	1	0
Albuminuria of pregnancy, Eclampsia ...	11	6	3	5	5
Other diseases of puerperium	4	3	1	3	1
Puerperal diseases of breast	0	0	1	0	0
	—	—	—	—	—
	36	25	36	20	15

Last year 15 deaths occurred, and there were 3,865 registered births. The maternal mortality was therefore 3.9 per 1,000 registered births, a very satisfactory figure. It will be noted that the number of deaths from puerperal sepsis was unusually small.

The above figures are taken from the Long List of the Registrar General. Careful enquiry was again made into the deaths of all women at the child-bearing ages in order to ascertain, if possible, whether death was connected in any way with pregnancy or parturition. In this way it was found that 27 deaths of women had

occurred either during pregnancy or within 4 weeks after parturition. A scrutiny of the reports of these cases suggests that in all of them pregnancy or child-birth was an important factor in determining the fatal result.

PUERPERAL SEPSIS:—Dr. Scott Dickson, in her report, gives details regarding the notifications of, and deaths, from this disease. There were 21 cases and 5 deaths, but certain of these were of women whose usual residences were not in Dundee. As set forth in the table in the preceding section, there were 3 deaths from puerperal sepsis. All cases of this infection are carefully enquired into with a view to the application of the necessary preventive measures.

OPHTHALMIA NEONATORUM:—Details are given in Dr. Dickson's report (page 107). There were 124 cases. In one case there was total loss of vision of both eyes, in another, partial impairment in both eyes, and in a third, impairment in the right eye (traumatic injury). The health visitors paid 1,246 visits to notified cases, 122 of these being initial visits and 1,124 re-visits.

BIRTHS:—There were 3,923 births registered in Dundee during the year. Corrected for transfers the number of births was 3,865 (1,983 males and 1,882 females) which represents a birth-rate of 22.6 per 1,000 of the population. The excess of births over deaths (natural increase of the population) was 1,056. The corresponding figure for 1923 was 1,682.

The following table shows the birth-rate per 1,000 population, the illegitimate rate per 100 births, and the marriage rate per 1,000 population each year since 1914.

Year.	Birth-rate.	Illegitimate-rate.	Marriage-rate.
1914	25.2	9.1	8.3
1915	22.1	8.0	9.5
1916	20.5	8.0	7.1
1917	15.6	11.2	7.0
1918	16.0	10.6	7.5
1919	18.7	11.1	10.6
1920	27.4	8.5	11.4
1921	26.5	7.7	10.0
1922	24.6	7.0	8.8
1923	24.6	7.9	8.3
1924	22.6	7.2	7.6

The number of illegitimate infants born during the year was 280, equal to 7.2 per cent. of the total births.

Under the Notification of Births Act, 3,892 births were notified. Of these 198 were stillbirths, so that of the 3,923 registered live births, 3,694 or 94 per cent. were notified under the above Act. In 1923, 94.2 per cent. of the registered births were notified.

Of the 3,892 notifications—

501	were received from doctors.
1,603	" " midwives.
63	" " doctor and midwife.
1,269	" " Maternity Wards, Royal Infirmary.
17	" " Eastern Poorhouse Hospital.
214	" " parents.
2	" " handywomen.
223	" " other sources.
<hr/>	
3,892	

The number of stillbirths notified was 198 or 5 per cent. of the registered live births.

VACCINATION :—Of the 3,893 children born between 1st July, 1923, and 30th June, 1924, for whom certificates of successful vaccination should have been lodged in 1924, 297 died before reaching the age of 6 months, certificates of conscientious objections to the operation were lodged in 2,443 cases and in 199 cases no returns of successful vaccination were made to the Registrar.

This means that only 26.5 per cent. of the infants who reached the age of six months were successfully vaccinated.

MARRIAGES :—There were 1,297 marriages celebrated in Dundee during 1924, representing a marriage-rate of 7.6 per 1,000 population. The corresponding rates for the last 10 years are shown in the table on the previous page.

MATERNITY AND CHILD WELFARE SCHEME :—Reference has already been made in this report to developments which may usefully be carried out in this Scheme. They relate chiefly to the ante-natal section, a certain number of beds being required for dealing

with abnormal pregnancies, to the necessity for additional health visitors, and to the urgent need for providing hospital treatment for a much larger number of measles and whooping cough cases than has been possible hitherto.

The activities under this Scheme are exactly the same as at the end of 1923 and no special comment is necessary here. The Ante-Natal Clinic had a very busy year and performed a considerable volume of useful work. The Dental Clinic was rather more busy than usual, but could deal with a much larger number of patients. It is hoped that this particular activity will develop considerably when it is possible to transfer the Clinic to the principal Centre. That should be considered when we secure the use of the top floor of the building which is at present occupied as a private dwelling-house.

The Infant Hospital proved invaluable. The following is the report of the resident medical officer:—

In Hospital 1st January, 1924	...	...	...	34	
Admitted	...	...	...	158	
				—	192

Discharged—

Relieved	...	...	...	89	
Unrelieved	...	...	...	3	
Taken home against advice	...	...	...	11	
Sent to Royal Infirmary	...	...	...	1	
Sent to King's Cross	...	...	...	5	
Sent home for disinfection	...	...	...	27	
				—	136
					56

Died—

Marasmus	...	...	...	15	
Broncho-pneumonia	...	...	...	3	
Meningitis after celluleris scalp	...	...	...	1	
Acute hydrocephalus	...	...	...	1	
Prematurity	...	...	...	1	
Intestinal intoxication	...	...	...	2	
				—	23

In Hospital 31st December, 1924	...	...	...	33	
Highest daily number	...	...	...	34	
Lowest daily number	...	...	...	10	
Average daily number	...	...	...	31.71	

The cases treated were:—

Marasmus 62	Anæmia 3
Rickets 24	Wasting 11
Gastro-enteritis ... 3	Tabes Mesenterica ... 1
General tuberculosis ... 2	Acute Hydrocephalus 1
Bronchitis 6	Kyphosis 2
Debility 5	Infantile dyspepsia ... 10
Tuberculous dactylitis 1	Infantile eczema ... 1
Imperforate anus (after operation) ... 1	Posterior basic meningitis 2
Pyloric Stenosis ... 1	Oedema neonatorum ... 1
Congenital syphilis ... 1	Intestinal decomposition 4
Congenital heart disease 1	Intestinal intoxication 2
Broncho-pneumonia ... 10	Prematurity ... 1
Mastoiditis 1	—
Mental weakness ... 1	158

MIDWIVES (SCOTLAND) ACT, 1915.—The following is a list of midwives who, during January, 1925 in-
timated their intention to practice midwifery in the
City of Dundee.

- 2863 Mrs Isabella Anderson, 4 Ferguson Street.
3057 Mrs Clementina Angus, 96 King Street, Broughty
Ferry.
1182 Miss Jean Arnott, 36 Dundonald Street.
4958 Mrs Jessie Bowman, 10 Hilltown.
3733 Mrs Ann Cartmill, 11 Gardner Street, Lochee.
400 Miss Alexandrina Clark, 287 Hilltown.
537 Mrs Margaret Cunningham, 249 Hilltown.
4423 Mrs Rachel H. Dobson, Elmridge, Blackness Road.
5925 Miss Eliza Gowans, 2 Erskine Street.
5404 Mrs Sarah Gunn, 78 Peddie Street.
3561 Mrs Jessie Howe, 145 Victoria Road.
755 Mrs Ellen King, 4 Miller's Wynd.
5186 Mrs Helen Low, 3 Elizabeth Street.
432 Mrs Jane R. Lowe, 2 Brown Street.
3122 Mrs Jane Masson, 3 Tayview Buildings, Broughty
Ferry.
410 Mrs Helen M'Donald, 31 Brook Street.
733 Mrs Ann Carrie Ramsay, 2 Ogilvie's Road.
1850 Mrs Isabella Scott, 2 Windsor Terrace, Broughty
Ferry.
5980 Miss Charlotte Shields, 1 Lawson Place.
5171 Miss Annie A. Stewart, 26 Union Place.
4688 Miss Flora B. Thomas, Salvation Army Home, Sea-
field Lodge.
6231 Mrs Isabella M'Kenzie Tulloch, 179a Blackness Road.
411 Mrs Elizabeth Webster, 48 Blackcroft.

There is nothing to which I desire to draw special
attention in regard to the working of the Act in this
area during the year 1924. I would however again
emphasise observations made in previous reports in
regard to the scale of fees fixed by the Scottish Board
of Health for the purposes of Section 22 of the Act
and also in regard to the futility of taking action under
Section 1 (2).

BIRTHS IN AREA OR DISTRICT.

DUNDEE—1924.

Total No. of Births during 1924.	Total No. of Deaths of New-Born Children (within 10 days) during 1924.	Actual No. of Births Attended by Midwives during 1924.	Actual No. of Deaths of New-Born Children (within 10 days) occurring in the Practice of Midwives during 1924.	Actual No. of Cases not Attended by a Doctor or Midwife during 1924.
4161	152	1606	51	Births. 2 Deaths. 2

CASES OF OPHTHALMIA NEONATORUM.

Total No. of Cases during 1924.	Actual No. of Cases occurring in the Practice of Midwives during 1924.	Actual No. of Cases Confinement not attended by a Doctor or midwife during 1924.
121	36	0

CASES OF PUERPERAL SEPSIS.

Total No. of Cases during 1924.	Total No. of Deaths during 1924.	Actual No. of Cases and Deaths occurring in the Practice of Midwives during 1924.	Actual No. of Cases and Deaths occurring where Confinement not attended by a Doctor or Midwife during 1924.
21	5	Cases. 8 Deaths. 0	Cases. 0 Deaths. 0

CASES OF STILL-BIRTH (DEAD-BORN).

Total No. of Cases during 1924.	Actual No. of Cases occurring in the Practice of Midwives during 1924.
198	48

CASES OF EMERGENCY. 155.

The Total No. of Cases of Emergency in which Medical Practitioners have been called in under Sect. 22 of the Act during 1924, distinguishing the different classes of emergency.	Labour.	Post-natal.	Infant.
Autonatal. 76	214	53	112

The following is the annual report for 1924 of Dr. Dickson, Inspector of Midwives :—

In January, 1924, 22 Midwives notified their intention to practice Midwifery in Dundee.

During the Year :—

- 2 Midwives left town.
- 1 Midwife gave up practice voluntarily.
- 2 Midwives notified their intention to take up practice in Dundee (1 in the Western district and 1 in the North Eastern district).
- 1 Midwife notified her intention to practice as a Midwife, but stated later she intended to practice as monthly nurse only.

This leaves on the local roll of Midwives at the end of December, 1924, 22 names, 19 of these 22 are actually practising as midwives.

These midwives attended a total of 1,606 births that is 38.6 per cent. of the total births (including still-births) occurring in the city during the year.

The extent of the practice of the individual midwife varies: one midwife having attended 200 cases, while another only attended 3 cases the average to each midwife in practice is 85 cases.

90 visits were paid by the Inspector of Midwives and her Assistant to the midwives homes and 7 visits were paid to cases attended by midwives.

4 Lectures were given to midwives on special subjects, connected with their work.

HANDYWOMEN.

6 cases of births reported as attended by Handywomen only were investigated, the circumstances were as follows :—

- (1) In this case the Handywoman was definitely told by the patient's friends that a Dr. had already been sent for, and was coming.
- (2) and (3) These two cases were cases of definite emergency.

- (4) This case was reported by a Dr. who had been asked to sign the Certificate for Maternity Benefit, and refused as he had not been called to the case. This was a second offence by the same woman, who stated that she understood the instructions given to her on the previous occasion only applied to illegitimate births. (?) She was reprimanded and another printed copy of Sect. 1 (2) of the Midwives' (Scot.) Act was sent to her.
- (5) Another case was reported by a Dr. for the same reason as No. (4). The Dr. had been engaged, but was not summoned until the next morning. The Handywoman stated she could not find a messenger to send for the Dr. She also stated she had never received the copy of Sect. 1 (2) of the Midwives' (Scot.) Act, which had been sent to her two years ago. She was warned, and another copy sent to her. This woman is unable either to read or write.
- (6) This case was a third offence by the same Handywoman, who has always stated that the cases were emergencies, which seemed doubtful in the present instance. She was warned, and a copy of Sect. 1 (2) of the Midwives' (Scot.) Act sent to her again.

532 Notifications have been received from Midwives as follows :—

(1)	Application for Medical Assistance for Mother...	343
	" " " " " Infant ...	112
(2)	Notification of Death (Infant)	16
(3)	" " Stillbirth	48
(4)	" " Laying out a dead body	4
(5)	" " Liability to be a source of Infec- tion	8
(6)	" " Artificial Feeding	1

Classification of applications for Medical Assistance.

Ante-natal 76.

Excessive Sickness	...	4
Abortion	...	11
Threatened Abortion	...	7
Abdominal Pain	...	1
Albuminuria	...	12
Headache	...	1
Cessation of Foetal movements	...	1
Pain in side	...	3
Swelling of limbs	...	1
Pain in back	...	2
Varicose Veins	...	7
Vaginal Discharge	...	3
False Pains	...	1
Previous Confinements		
Abnormal	...	1
Unclassified	...	17

Labour 214.

Prolonged Labour (including uterine Inertia and Right Occipito Posterior) ...	81
Ruptured Perinæum ...	51
Adherent Placenta ...	11
Contracted Pelvis ...	1
Abnormal Presentations	23
Hæmorrhages—	
1. Acute Partum ...	4
2. Post Partum ...	5
Eclampsia ...	6
Stillborn Infants ...	28
Collapse ...	2
Oedema of hands and feet ...	2

Complications of Pregnancy.

Fainting attacks	... 2
Skin Rash	... 1
Hæmatemesis	... 1

Post-natal 53 Cases.

High Temperature	... 20
Abdominal pain	... 4
Cough and pain in side	7
Pain in leg	... 3
Fainting attacks	... 1
Mastitis	... 2
Varicose Veins	... 3
Influenza	... 1
Swelling of Genitals	... 1
Swollen Veins	... 1
Rigor	... 2
Swelling right side of	
Abdomen	... 1
Septic Boils	... 2
Pain in hands and feet	1
Pain over Coccyx	... 1
Fœtid Vaginal Dis-	
charge	... 1
Debility	... 1
Headache	... 1

Infant 112 Cases.

Premature and Feeble	
Infants	... 39
Discharging Eyes	... 34
Congenital Malforma-	
tions	... 12
Icterus Neonatorum	... 5
Rash	... 3
Swelling of Genitals	... 3
Convulsions	... 3
Sudden Death	... 2
Cough	... 2
Hæmorrhage	from
Cord	... 1
Cyanosis	... 1
Pallid Baby	... 1
Injuries at birth	... 1
Facial Paralysis	... 1
Swollen Abdomen	... 1
Unclassified	... 3

10 Midwives were reprimanded for 16 Offences against the C.M.B. rules. The particulars of these cases were as follows:—

- (1) One Midwife failed to report to L.S.A. that she had attended a septic case and to have herself disinfected, Midwife was not attending any other cases at the time.
- (2) (a) Complaint received from a private doctor that a midwife had not sent for medical aid though it had been reported to her that she would require assistance at labour. On enquiry, found that patient had not explained the doctor's advice clearly to midwife. Labour was easy and normal.
- (b) Failed to send for Medical assistance when she recognised a prolapse of cord. On enquiry Midwife stated cord was pulseless and Labour rapid.
- (c) Failed to report at once that she was attending a Midwifery case, where the children had been removed with Scarlet Fever; Midwife never came in direct contact with children.
- (3) One Midwife omitted to fill in her cases in Register.
- (4) One Midwife omitted to fill in Charts of Temperature and Pulses, at the time of her visit. Found doing so from memory.

- (5) One Midwife failed to call in Medical assistance until 2 days had elapsed in a case of discharging eyes, and neglected to notify the L.S.A. until the 4th day after the onset of the disease. Vision of both eyes was totally destroyed. Case reported to C.M.B. Midwife summoned to Board and severely censured.
- (6) (a) One Midwife failed to attend her patient for 10 days during puerperium. Midwife had paid 9 visits in all and found patient doing her house work: Child had died on 5th day.
- (b) Complaint received from private doctor that the same Midwife questioned his treatment in a case of labour that she had called him in to her assistance.
- (c) The same Midwife failed to call in Medical assistance at once in a case of "Discharging eyes." Case reported to C.M.B. Midwife summoned to Board and censured.
- (7) (a) A written complaint received from husband stating that his wife had suffered an acute nastitis resulting from the general carelessness of the Midwife in attendance and the lack of attention and advice on her part.
- (b) The same Midwife was again the subject of a written complaint from a husband for her carelessness and neglect of the patient during puerperium. Both these cases were reported to C.M.B., but, as Midwife had decided to give up practice, no further steps were taken.
- (8) One Midwife failed to keep her bag in readiness to attend her cases.
- (9) One Midwife failed to use **Official Form** for notifying Discharging Eyes. Case reported to C.M.B., but, as Midwife had practically done everything possible for the child and sent private letter to M.O.H., which had not been received. Case was not proceeded with.
- (10) (a) One Midwife failed to visit on the 10th day. Patient paid off Midwife on the 9th day and told her not to return. On the 10th day Infant's eyes commenced to discharge.
- (b) The same Midwife failed to have her bottles properly labelled.

7 Midwives had to be reminded to notify births; send in Liability to be a source of Infection Forms, and to have bottles sufficiently and clearly labelled in Midwifery bags.

During 1924 an enquiry was made into 24 deaths of women occurring at Childbirth or within 28 days after.

Of these 1 was by Midwife.

12 were attended by Maternity Ward, D.R.I.
 7 I.P.; 5 O.P.
 2 " Doctor and Midwife.
 7 " Doctors.
 1 was attended in Nursing Home.
 1 " Eastern Poorhouse Hospital.

4 women died during Pregnancy but were not in Labour at time of death and died undelivered.

1 attended by Doctor.
 1 " Doctor and Midwife.
 1 " Eastern Poorhouse Hospital.
 1 " Dundee Royal Infirmary.

Classification of the notified Causes of Death.

(a) Causes of Deaths not connected with Pregnancy—9 cases.

- 1 Chronic Nephritis Broncho Pneumonia Terminal Pericarditis.
- 1 Lobar Pneumonia Mitral Stenosis.
- 1 Broncho Pneumonia Cardiac Failure.
- 1 Broncho Pneumonia.
- 1 Lobar Pneumonia.
- 1 Myocarditis Laryngitis.
- 1 Pernicious Anæmia.
- 1 Pulmonary Tuberculosis (debility after confinement).
- 1 Influenzal Pneumonia.

(b) Causes of Death indirectly connected with Parturition—3 cases.

- 1 Debility General Peritonitis after Central Placenta Prævia.
- 1 Peritonitis following Ceasarian Section.
- 1 Uræmia after Eclampsia.

(c) Deaths due to the emergencies of Parturition—12 cases.

- 1 Eclampsia and Adherent Placenta.
- 1 Eclampsia.
- 1 Eclampsia.
- 1 Placenta Prævia and Ante Partum Hæmorrhage.
- 1 Adherent Placenta Post Partum Hæmorrhage with Acute puerperal inversion of the Uterus.
- 1 Uterine Hæmorrhage. Shock Cardiac Failure.
- 1 Eclampsia Puerperal Sepsis Pneumonia.
- 1 Placenta Prævia (6½ months pregnancy) died in Labour (undelivered).
- 4 Puerperal Sepsis.

(d) Causes of Death in Women who died during Pregnancy—4 cases.

1 Embolism.

1 Eclampsia.

1 Retro Peritoneal Hæmorrhage.

1 Basal Meningitis Broncho Pneumonia Enteritis.

Particulars of Deaths due to Puerperal Sepsis—5 cases.

Of these 2 were attended by Doctors.

2 were attended by Doctors (outwith the Dundee Boundary admitted to Dundee Royal Infirmary).

1 case was delivered in a Nursing Home in Glasgow and removed later to Infectious Disease Hospital, Glasgow.

Special Particulars :—

1 Long Labour Instrumental Delivery.

1 Possibly Cerebral Influenza?

Rural Cases :—

1 Precipitate Labour (Dr. arrived at 3rd stage).

1 Ruptured Perinæum.

Glasgow Case :—

1 had Eclampsia at Labour and possible Hæmorrhagic condition on the brain.

PUERPERAL SEPSIS.

21 Cases of Puerperal Sepsis occurred in 1924 of which

16 recovered.

5 died.

8 of these cases were attended at birth by Midwives.

8 recovered.

10 of these cases were attended at birth by Doctors.

5 died (2 rural, 1 Glasgow).

5 recovered.

2 of these cases were attended by Maternity Staff.

2 recovered.

1 of these cases attended at birth by Doctor and Midwife.

1 recovered.

STILLBIRTHS.

198 Stillbirths were notified during 1924.

48 of these occurred in the practice of Midwives.

32 were Full-time infants.

16 were Premature infants.

Of the 32 Fulltime Stillbirths.

11 were cases of Macerated Fœtus.

12 were due to complications during Labour.

9 Unclassified.

Of the 16 Premature Stillbirths.

12 were cases of Macerated Fœtus.

4 were Unclassified.

OPHTHALMIA NEONATORUM.

124 Cases of Ophthalmia Neonatorum were notified during the year.

Of the 124 Notifications of Ophthalmia Neonatorum :—

13 were received from Doctors (6 Doctors, 7 Midwives) attendant at birth.

20 were received from Midwives.

17 were received from Doctors and Midwives (10 Doctor and Midwife, 7 Midwives).

66 were received from Maternity Ward, Dundee Royal Infirmary (4 I.P., 62 O.P.).

2 were received from East Poorhouse Hospital.

4 were received from Child Welfare Department (1 Mat. I.P., 1 Midwife and Doctor, 2 Midwives).

2 were received from Eye Institution (2 Mat. O.P.).

Of these 124 Cases :—

6 were attended at birth by Doctors out of a total of 1,159 Confinements.

11 were attended at birth by Doctor and Midwife out of a total of 63 Confinements.

36 were attended at birth by Midwives out of a total of 1,606 Confinements.

64 O.P. }
5 I.P. } were attended at birth by Midwives out of a total of 1,281 Confinements.

2 were attended at birth by East Poorhouse Hospital out of a total of 19 Confinements.

TREATMENT AND RESULTS.

1,246 Home visits were paid by the Health Visitors (122 initial, 2 not visited (E.P.) 1,124 re-visits).

ADMITTED TO HOSPITAL.

- 6 cases were admitted to King's Cross Hospital.
- 1 case admitted to Dundee Royal Infirmary.
- 2 cases were born and treated in East Poorhouse Hospital.

117 Cases recovered completely with no damage to the eyes.

- 1 case total loss of vision of both eyes resulted.
- 1 case both eyes were partially damaged.
- 1 case the right eye was slightly damaged which seemed to be due to a traumatic injury.
- 1 case born in East Poorhouse Hospital reported cured.
- 3 Infants died of Congenital Debility during treatment (1 case in E.P.H.).

Notes on the general working of the Midwives' (Scot.) Act in 1924.

22 Midwives are on the Roll as compared with 23 at the end of 1923.

19 of these are actually practising as Midwives as compared with 20 at the end of 1923.

The births attended by Midwives during the year are fewer:—

1,606 out of a total of 4,161 (36.6%) compared with
1,889 " " 4,458 (42.1%) in 1923.

The deaths of babies under 10 days occurring in Midwives' practices shew an increase of 51 compared to 33 in 1923.

The total Notifications of O.N. are only 124 compared with 209 in 1923, and 36 of these occurred in the practice of Midwives compared with 46.

The total number of Notifications of Puerperal Sepsis have been much increased from 14 in 1923 to 21 in 1924, but many of the cases have been very mild; and the deaths have only numbered 5 compared to 7.

8 of the cases were Midwives' cases compared to 4 in 1923, but none of these cases proved fatal.

There has been an increase in the number of cases in which Medical Aid has been sought for by Midwives from 420 to 455 and it is noteworthy that practically the whole of this increase has been for Ante-Natal cases. The numbers are as follows:—

			1923.	1924.
Ante-Natal	...	...	53	76
Labour	...	...	203	214
Post-Natal	...	...	53	53
Infant	...	...	111	112
			<hr/>	<hr/>
			420	455

Notification of Birth and other Forms were received more promptly and there were fewer cases of omission to send such forms.

4 Midwives were reported to the C.M.B. for serious neglect of Rules.

1 case was dismissed without a Summons to the Board as the neglect was unintentional. (Case No. 9 in Report).

1 case was not proceeded with as the Midwife gave up work voluntarily about the same time. (Case No. 7).

2 Midwives were summoned before the Board and censured. (Cases Nos. 5 and 6).

Sanitation and Housing.

The annual report of Mr Mitchell, the Chief Sanitary Inspector, is included in this volume and will be found on page 163. It is a record of excellent work done during the year for the maintenance of and improvement in the standard of sanitation throughout the city. I have referred to sanitation and housing in dealing with other subjects in this report and I intend here to submit only a very few observations on certain points mentioned by Mr Mitchell.

It is recorded that in the Dundee Water Area there is a daily water consumpt of 46.2 gallons of which 16.2 gallons represent the meter supply for trade and general public health puposes leaving 30 gallons per head for general domestic purposes. The figure is a very satisfactory one. It is explained however that although 30 gallons per head is the average consumpt in the city and district, the individual consumpt varies between exceedingly wide limits and that it is least in those districts of the city where housing and congestion are worst. There it dwindles down to less than 10 gallons per head per day. That statement is a very important one. An ample supply of pure water in an accessible situation is essential in every house if a proper standard of hygiene is to be maintained. It is unfortunate that with such an excellent and plentiful supply of water available there should be in Dundee a tremendous number of houses lacking an inside supply and the proper means for the disposal of waste water. The low consumpt per head in certain parts of the town is not so much due to the habits of the people as to the lack of the essential facilities. Given these facilities, the habits will improve steadily. Without them, they can never improve. It may be agreed that for a proper standard of cleanliness something like 30 gallons of water per head per day is necessary, but it is quite easy to understand why that

amount is not used if the water has to be carried by hand some considerable distance or possibly even up several flights of stairs, the same volume of waste water having to be removed from the dwelling. A family of say 5 persons would use 150 gallons of water. With no inside supply and no inside sink for disposal of waste water, transport becomes a very difficult matter. Under these conditions, an absence of perfect cleanliness is excusable. Mr. Mitchell points out that last year "108 sinks complete with water taps, waste pipes and drainage have been introduced into the dwelling houses at 44 different properties, the occupiers of which had previously to obtain their water supply for domestic purposes from outside sources and had to remove the waste water from the house by means of pails and other receptacles." That sentence provides evidence of definite progress, but I would like to see a larger number of such properties dealt with. A house which has not within its walls a water tap and sink properly drained must be considered as being a house unfit for human habitation, and it should be possible to deal with it as such.

Special note should be made of Mr. Mitchell's remarks regarding ashpits and ashbins. It is hoped that during the present year an active campaign for the total abolition of the former will be instituted in Dundee.

Early in 1925 Mr. Mitchell submitted a report summarising the work done in 1924 in connection with housing. I have nothing to add to what is contained in that report. There would appear to have been 131 more houses available to relieve shortage at the end of 1924 compared with the end of 1923. In 1924, 165 new houses were erected, 103 by private enterprise, and 62 under the Local Authority's housing schemes. At 31st December, 1924, 309 houses were in course of erection and should be finished during 1925.

Slum clearance received considerable attention although no slums were actually demolished. In February I prepared a very full report on the sanitary conditions of the Blue Mountains Area and recommended that the Town Council should deal with it under their Slum Clearance Schemes. Later in the year, I submitted an Official Representation in regard to a large

section of the area, and it was agreed to deal with it as an Improvement Scheme. Before the end of the present year, many of the houses in this area should be ready for demolition.

Factories and Workshops Act, 1901.

The following are the particulars regarding premises examined by the staff of this Department and defects discovered and remedied.

1. Inspection of Factories, Workshops and Workplaces.

PREMISES.	NUMBER OF		
	Inspection.	Written Notices.	Prosecutions.
Factories (including Factory Laundries)	160	—	—
Workshops (including Workshop Laundries)	1,484	1	—
Workplaces (other than Outworkers' Premises)	225	—	—
Total	1,869	1	—

2. Defects found in Factories, Workshops and Workplaces.

PARTICULARS.	Number of Defects		Referred to H.M. In- spector.	Number of Prosecu- tions.
	Found.	Remedied.		
Nuisances under the Public Health Acts :—				
Want of cleanliness	80	80	—	—
Want of ventilation	5	5	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	4	4	—	—
Sanitary Accommodation—				
Insufficient	—	—	—	—
Unsuitable or defective	3	3	—	—
Not separate for sexes	—	—	—	—
Offences under the Factory and Workshops Acts :—				
Illegal occupation of underground bakehouse (s101)	—	—	—	—
Total	92	92	—	—

A detailed list of workshops, etc., on the register is given by the Chief Sanitary Inspector on page 181 along with details regarding matters referred to by H.M. Inspector as remediable under the Public Health Act.

As is usual the bakehouses in the city were systematically inspected, some 764 visits having been made by the inspectors. While no doubt satisfying legal requirements, the standard of cleanliness and tidiness essential in premises where food is prepared is not being maintained in all bakehouses in the city. While reluctant to adopt legal measures, I am afraid it will be necessary in certain cases. It is not always the small bakehouse which is at fault. Too often it is a large bakehouse, and one of these was last year reported to this Department by H.M. Factory Inspector for lack of cleanliness. Only moderate results followed our action.

Food Poisoning.

An extensive outbreak of food poisoning occurred in the city in August. A very thorough investigation was carried out and the results of the enquiry may be summarised as follows:—

1. An outbreak of gastro-enteritis occurred in Dundee early in August, 1924.
2. The outbreak involved at least 703 persons, mainly adult women.
3. The cause of the illness was the bacillus *ærrycke*, a member of the *Salmonella* group.
4. The vehicle of the infection was the cream mixture contained in various forms of cream cakes prepared in a certain bakery.
5. The available evidence suggests that only one large batch of cream cakes contained the organism.
6. The available evidence points to the probability that the cream or the cream mixture was contaminated in the bakery.
7. The source of infection of the cream was not definitely ascertained, but channels were found to exist by which the organism could too easily reach the foodstuffs, given a focus of infection in or near the bakehouse. The evidence was at least suggestive that the cream was contaminated by rodents, probably mice, while in storage in the cellar of the bakehouse during the Dundee holiday week.

In October there occurred a few cases of very mild gastro-enteritis among infants fed on cows' milk from a particular source. A cow was discovered to have a septic focus in the udder, traumatic in origin, and probably the outbreak was due to milk from this cow which had been mixed with other milk and distributed among the affected households. The milk did not appear to have any effect on adults known to have consumed it. Bacteriological investigations were carried out on samples of the milk, but nothing specific was found.

Meat Inspection.

The Public Health (Meat) Regulations (Scotland) 1924 came into force on 1st August. The Public Health Committee of the Dundee Town Council at a meeting held on 20th October appointed the Medical Officer of Health, the Veterinary Surgeon and Mr John D. Anderson, Superintendent of Slaughterhouses as Meat Inspectors under these Regulations. They also agreed to the appointment of two detention officers in terms of the Regulations. One of these last-named officials began duty on 24th November and the other on 15th January of the present year. It should now be possible to carry out in a fairly efficient manner at our Slaughterhouses the uniform system of meat inspection elaborated by the Scottish Board of Health. During the year under review the work was carried out pretty much along the old lines.

The following tables are prepared and submitted by Mr John D. Anderson, Slaughterhouses Superintendent and Meat Inspector:—

Unsound Food. All Seized at the Public Slaughter-Houses.

Number of Seizures, Weight of Meat Seized, and Reasons for Seizure.

FOR YEAR ENDING 31st DECEMBER, 1924.

DISEASE	BEEF		MUTTON		PORK		TOTAL	
	Number	Weight	Number	Weight	Number	Weight	Number	Weight in Lbs.
(a) Tuberculosis	580	125,692	—	—	81	3,845	661	129,537
(b) Other Diseases:—								
Pneumonia	43	3,581	68	463	2	157	113	4,201
Fevered Conditions	163	20,167	144	6,790	23	1,731	330	28,688
Septic Conditions	36	13,758	25	352	3	174	64	14,284
Rheumatism	49	3,374	1	3	6	95	56	3,472
Fractures and Bruises	134	12,149	54	425	41	1,193	229	13,767
Dropsical Conditions	111	7,719	111	2,999	49	1,469	271	12,187
Inflammation of Abdominal Organs	103	15,026	30	525	19	700	132	16,251
Asphyxiation	2	1,326	21	1,071	—	—	23	2,397
Decomposition	3	1,081	29	533	15	398	47	2,012
Actinomycosis	139	2,496	—	—	—	—	139	2,496
Anthrax	2	2,056	—	—	—	—	2	2,056
Abscesses, Tumours, and Cysts	31	351	—	—	3	111	34	466
Wasted Conditions	2	779	2	58	—	—	4	837
Lymphadenitis	2	928	—	—	—	—	2	928
Totals	1,400	210,485	485	13,219	242	9,876	2,127	233,579

TABLE 2.—Shews the numbers of the different kinds of Animals Slaughtered at the Public Slaughter-houses each month during 1924, also the numbers of their carcasses found to be Diseased or Unsound, and the weights of each class seized and destroyed.

MONTH.	Animals Slaughtered.				Numbers of their Carcasses Diseased or Unsound.				Weights (in lbs.) condemned from Carcasses of Animals Slaughtered on the Premises.				
	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	TOTAL.
1924.													
January -	986	4	1,304	315	70		4	14	8301	...	112	242	8,655
February -	1,145	4	1,509	341	85	...	1	12	11,436	...	6	603	12,045
March -	1,414	1	1,914	429	91	1	6	17	12,131	12	220	170	12,533
April -	1,143	2	1,762	285	73	1	3	11	9,413	...	90	223	9,726
May -	1,463	2	1,778	336	93	...	2	10	15,132	...	35	574	15,741
June -	1,079	1	1,359	222	78	...	5	9	10,591	...	156	238	10,985
July -	1,022	2	1,314	145	49	...	3	8	8,017	...	22	83	8,122
August -	1,399	9	1,919	165	83	1	2	12	14,322	40	21	643	15,026
September	1,181	20	1,765	178	79	...	4	16	14,769	...	75	359	15,203
October -	1,137	17	1,712	304	41	...	4	23	6,210	...	82	96	6,388
November	1,447	12	2,422	510	91	...	3	15	8,011	...	109	59	8,179
December	1,222	2	1,979	420	101	1	5	35	10,210	51	57	418	10,736
Totals -	14,638	76	20,737	3,650	934	4	42	182	128,543	103	985	3,708	133,339

TABLE 3 —Shows the numbers of the different kinds of Carcasses, dressed and undressed, brought to the Slaughter-houses each month during 1924, with the numbers found to be diseased or unsound, and the weight of each class seized and destroyed on that account.

MONTH.	Carcasses brought in.				Numbers of them diseased or unsound.				Weight (in lbs.) Seized and Condemned from Carcasses brought in.				
	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	Total.
1924.													
January -	372	4	550	72	37	...	41	5	4,524	...	801	465	5,790
February -	207	10	493	27	20	2	73	3	6,142	84	1,803	408	8,437
March -	288	18	553	39	33	2	72	9	7,222	84	2,430	792	10,528
April -	190	13	347	32	56	3	56	6	7,113	222	1,385	472	9,192
May -	230	16	413	27	66	1	42	2	11,191	53	1,189	314	12,747
June -	312	6	482	24	34	3	34	8	8,213	75	1,108	578	9,974
July -	344	...	353	18	20	...	12	5	4,963	...	348	888	6,199
August -	415	6	376	32	28	1	13	3	9,243	44	315	474	10,076
September	382	6	345	23	41	1	12	3	8,216	..	614	544	9,374
October -	321	9	525	17	22	...	31	2	4,687	49	620	496	5,803
November	338	11	307	34	32	1	38	6	5,332	49	902	93	6,376
December -	239	9	210	42	59	...	19	8	4,382	...	719	643	5,744
Total	3,638	108	4,954	387	448	14	443	60	81,228	611	12,234	6,167	100,240
Table No. 2	14,638	76	20,737	3,650	934	4	42	182	128,543	103	985	3,708	133,339
Total of Tables 2 and 3	18,276	184	25,691	4,037	1,382	18	485	242	209,771	714	13,219	9,875	233,579

The following is a synopsis of the organs seized and condemned in addition to the foregoing at the Slaughter-houses for the full year.

Cattle Organs.			Sheep Organs.			Pigs' Organs.		
Cow Udders	...	106	Livers	...	12	Udders	...	12
Livers	...	601	Plucks	...	81	Plucks	...	62
Lungs	...	481	Kidneys	...	52	Kidneys	...	2
Hearts	...	127	Lungs	...	29	Livers	...	31
Kidneys	...	82						
Heads	...	197						
Tongues	...	101						
Skirts	...	103						

Tinned and Frozen Meat seized for Decomposition :—

Frozen Meat	...	...	...	...	775 lbs.
Tinned Meat	...	...	...	...	282 „
4 tins Liquid Eggs	...	...	...	...	60 „
					<hr/>
					1,117 lbs.

TABLE 4.—The totals for the years 1904 to 1923, (excluding 1915 to 1918) were:—

YEAR.	Carcases Examined.				Numbers Diseased or Unsound.				Weight (in lbs.) of Meat Seized and Condemned.				
	Cattle.	Calves.	Sheep.	Pigs.	Cattle.	Calves.	Sheep.	Pigs.	Beef.	Veal.	Mutton.	Pork.	TOTAL.
1904	17,451	801	32,358	6,004	608	67	214	59	175,381	3,295	7,915	5,758	192,349
1905	18,033	801	31,891	5,484	603	49	259	47	176,778	2,471	9,227	5,164	193,640
1906	19,127	891	34,676	4,690	603	51	230	46	177,705	2,318	8,664	5,931	194,618
1907	19,439	904	34,763	5,157	562	56	253	52	145,114	2,554	9,686	3,989	161,343
1908	19,137	684	33,759	5,052	588	45	264	61	159,519	1,936	9,487	6,193	177,135
1909	19,714	780	47,363	3,490	597	53	218	57	158,354	2,579	7,511	6,019	174,463
1910	19,957	664	41,782	3,255	602	38	167	53	160,085	1,942	6,184	5,084	173,295
1911	19,015	561	40,611	4,132	582	33	179	55	154,380	1,871	7,322	6,657	170,210
1912	18,836	574	38,896	4,339	573	39	173	71	150,502	2,194	7,160	7,106	166,962
1913	19,206	515	34,929	2,744	633	45	131	24	155,996	2,115	5,807	2,086	166,004
1914	18,664	427	34,672	3,401	549	38	156	52	134,341	1,811	6,595	3,624	146,371
1919	19,743	268	38,156	4,381	463	45	228	95	135,692	2,328	8,281	1,494	147,795
1920	20,933	250	29,795	2,386	627	51	170	58	174,715	2,955	6,707	5,931	190,308
1921	17,914	182	26,357	2,717	633	32	214	52	144,858	2,278	9,353	4,572	161,061
1922	18,825	207	31,139	4,199	479	38	350	120	188,971	1,762	13,537	6,974	211,244
1923	18,756	138	26,246	3,570	958	33	318	113	919,803	2,092	12,319	8,162	942,606

The numbers of carcasses wholly or partially condemned for tuberculosis during each of the last five years were as follows :—

YEAR.	Bulls.	Bullocks.	Heifers.	Cows.	Calves.	Sheep.	Pigs.	Total.
1920	18	81	25	178	1	—	41	344
1921	7	83	17	200	1	—	31	339
1922	16	93	22	260	5	1	65	462
1923	25	166	17	263	—	—	41	512
1924	36	211	14	319	1	—	81	662

Milk Supply.

Mr. Mitchell has set forth in his report the main particulars regarding milk sampling and dairy inspection. It is satisfactory to note that a large quantity of a graded milk (pasteurised) is now available in the city, two dealers and some 27 purveyors having been granted the necessary licences by the Local Authority. Certified and grade A. milks cannot yet be obtained in Dundee but I hope that during the present year, a supply of these higher grades will be introduced. A bigger price will have to be demanded for a certified or grade A. milk but it must be noted that an article of guaranteed nutritive value and purity is being supplied.

During 1924, 74 samples of milk were submitted to bacteriological examination. The details regarding a number of the results of these examinations are set forth below. It will be noted that there is very marked variation in the bacterial content. Some of the samples were evidently exceedingly satisfactory coming well within the requirements (bacterial) for a certified milk.

No.	SOURCE OF MILK.	Approx. No. of bacteria per c.c.	B. Coli absent in
1.B.	Shop selling milk, provisions, vegetables, &c.	7,000	.01 cc.
2.B.	Do. Do.	10,000	.1 cc.
3.B.	Van in street	25,000	.0001 cc.
4.B.	Do.	11,500	.01 cc.
6.B.	Shop selling milk and confectionery ...	189,000	.001 cc.
7.B.	Shop selling milk only	7,000	.1 cc.
8.B.	Shop selling milk, provisions, &c. ...	84,000	.0001 cc.
9.B.	Do. Do.	—	.01 cc.
11.B.	Dairy premises	490,000	.0001 cc.
15.B.	Shop selling milk, provisions vegetables	8,000	.01 cc.
16.B.	Do. Do.	3,000	.1 cc.
21.B.	Shop selling milk, provisions, &c. ...	105	.01 cc.
22.B.	Shop selling milk, provisions, vegetables, &c.	751,000	.01 cc.
27.B.	Van in street	518,000	.0001 cc.
29.B.	Milkhouse in cowkeeper's premises ...	421,000	.1 cc.
30.B.	Shop selling milk, groceries, vegetables, &c.	4,400,000	.01 cc.
33.B.	Milkhouse in cowkeeper's premises ...	126,000	.01 cc.
41.B.	Shop selling milk, provisions, &c. ...	5,285,000	.001 cc.
43.B.	Shop selling provisions, vegetables ...	Uncountable.	.0001 cc.
46.B.	Shop selling milk, newspapers and con- fectionery	3,750,000	.001 cc.
47.B.	Shop selling milk, provisions, vegetables, &c.	2,700,000	.001 cc.
48.B.	Milkhouse in cowkeeper's premises ...	890,000	.001 cc.

Twenty-four of the 74 samples were tested for tubercle bacilli by animal inoculation. Only one positive result was obtained.

Undoubtedly definite progress was made last year in the direction of a purer milk supply, and if the Milk and Dairies (Scotland) Act, 1914 comes into operation on 1st September of this year, as seems likely, still further progress should be possible in the immediate future.

Preservatives in Food.

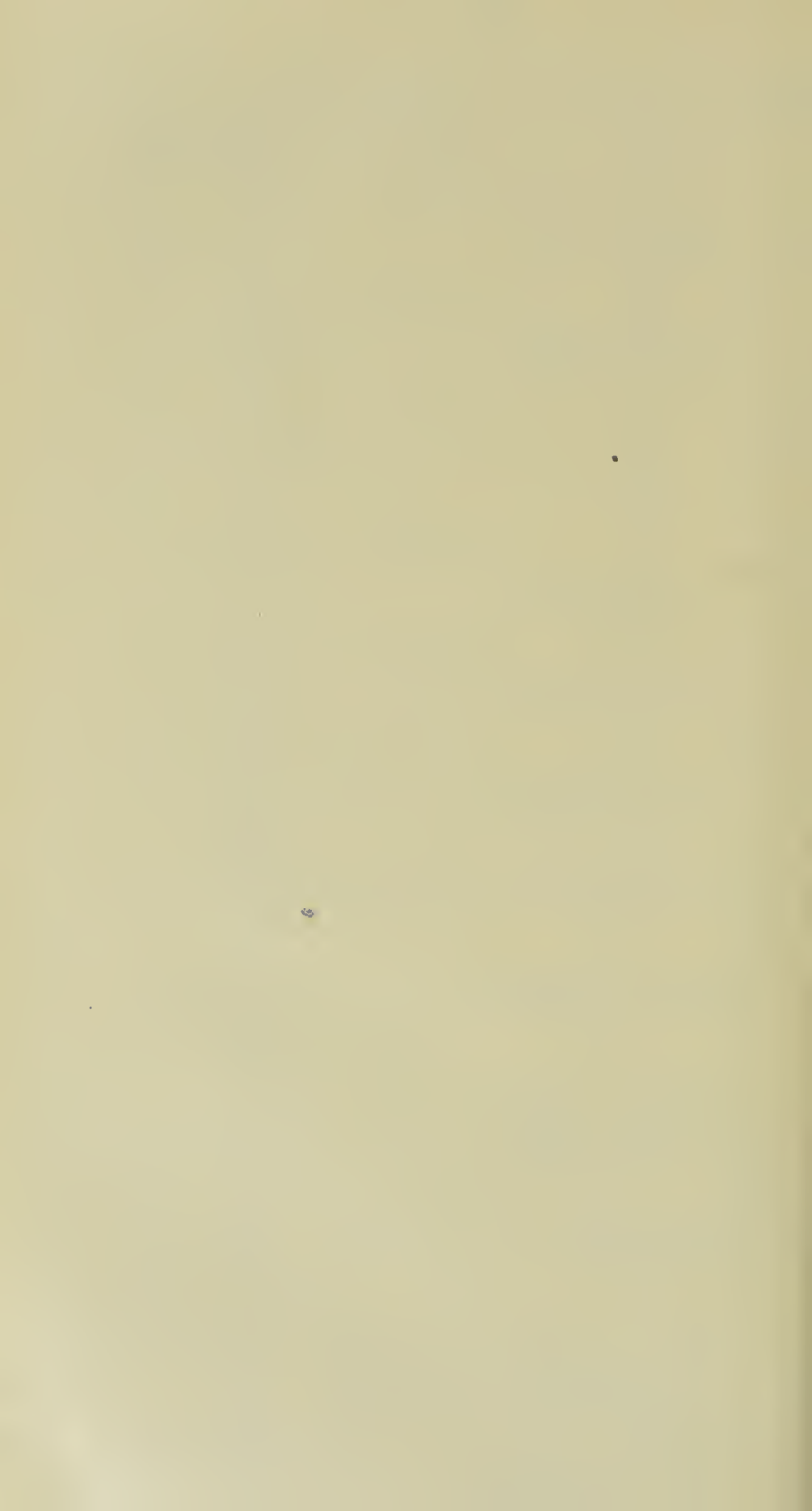
In view of possible legislation on the subject of food preservation, I again submit a list of foods found to contain chemical preservatives:—

Boric acid was found in samples of—

					Amount.
1.	Margarine	...	...	...	.34 per cent.
2.	Do.	...	...	...	.35 "
3.	Salted margarine	...	...	...	.39 "
4.	Margarine (fresh)	...	...	...	.76 "
5.	Margarine	...	...	...	.31 "
6.	Do.	...	...	...	.41 "
7.	Margarine (fresh)	...	...	...	.24 "
8.	Salted margarine	...	...	...	.32 "
9.	Margarine (fresh)	...	...	...	.28 "
10.	Do.	...	...	...	.23 "
11.	Do.	...	...	...	.47 "
12.	Do.	...	...	...	.42 "
13.	Do.	...	...	...	.45 "
14.	Do.	...	...	...	.43 "
15.	Do.	...	...	...	.16 "
16.	Salted margarine	...	...	...	.39 "
17.	Do.	...	...	...	.10 "
18.	Fresh butter	...	...	...	.26 "
19.	Fresh margarine	...	...	...	.11 "
20.	Salted margarine	...	...	...	.09 "
21.	Do.	...	...	...	.10 "
22.	Fresh margarine	...	...	...	.21 "
23.	Salted margarine	...	...	...	.22 "
24.	Do.	...	...	...	.20 "
25.	Fresh margarine	...	...	...	.16 "
26.	Salted margarine	...	...	...	.17 "
27.	Do.	...	...	...	.23 "
28.	Do.	...	...	...	.22 "
29.	Fresh margarine	...	...	...	.23 "
30.	Salted margarine	...	...	...	.24 "
31.	Do.	...	...	...	.28 "
32.	Margarine	...	...	...	.19 "
33.	Salted margarine	...	...	...	.36 "
34.	Fresh margarine	...	...	...	.31 "
35.	Salted margarine	...	...	...	.15 "
36.	Do.	...	...	...	.14 "
37.	Fresh margarine	...	...	...	.24 "
38.	Margarine	...	...	...	.21 "
39.	Margarine	...	...	...	.30 "

Salicylic acid was found in samples of—

1.	Tomato Sauce	...	...	...	.96 grs. per lb
2.	Sauce (seasoning)	...	...	...	.83 "
3.	Tomato Sauce	...	...	...	.10 "
4.	Coffee	...	...	...	.15 "
5.	Coffee Essence	...	...	...	.88 "
6.	Sauce (seasoning)	...	...	...	.93 "



Tuberculosis.

Dr. Hunter's Report.

During the year 1924 there has been no change in the Anti-Tuberculosis campaign, work having been carried out on the established lines with gratifying results.

The relations with the other Authorities concerned in the work, such as the Education Authority, Parish Council, Ministry of Pensions, Royal Infirmary, etc., have been cordial, and the co-operation well maintained.

To the staffs of the Dispensary, King's Cross Hospital, Ashludie Sanatorium and the other branches of the Public Health Department I here tender my appreciation of their helpful services which have been of great value in the furtherance of our scheme.

In the year 1924 437 cases of tuberculosis were notified, 288 cases of pulmonary tuberculosis and 149 cases of non-pulmonary tuberculosis. Of these—

138 cases were discovered at the Dispensary.

163 cases were notified by private practitioners.

4 cases were notified by the school medical officer.

6 cases were notified from Eastern Hospital.

56 notifications came from the Royal Infirmary.

13 notifications came from the Convalescent Home.

6 notifications came from medical officers outside the city.

1 case was notified by the superintendent of emigration for Canada.

2 notifications came from the Infant Hospital, Broughty Ferry.

48 cases came under notice of the Department through the Registrar after death had taken place.

The ages and sex of the 288 cases of pulmonary tuberculosis were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	0	0	0
1- 5 years	...	7	4	11
5-15	„	26	26	52
15-25	„	31	39	70
25-45	„	45	57	102
45-65	„	19	27	46
65 years and upwards		2	5	7
Total	...	130	158	288

The following are the particulars as regards housing :—

No. of rooms.	No. of cases.	Total No. of Inmates.	No. of Inmates per room.
1	53	172	3.25
2	149	788	2.64
3	41	260	2.11
4 and upwards	30	142	1.18

9 lived in lodging-houses.

3 cases were visited and home conditions found satisfactory.

1 case lived in a nursing home.

1 case lived in an industrial school.

1 case lived on a ship.

211 houses were disinfected on removal of patients and at time of death, as compared with 209 in 1923.

NON-PULMONARY TUBERCULOSIS.

During the year 149 cases of non-pulmonary tuberculosis were notified. The age and sex of these were as follows :—

Age.		Males.	Females.	Total.
Under 1 year	...	4	1	5
1- 5 years	...	33	21	54
5-15	„ ...	18	18	36
15-25	„ ...	15	10	25
25-45	„ ...	4	15	19
45-65	„ ...	6	2	8
65 years and upwards		1	1	2
Total ...		81	68	149

The seats of the disease were as follows :—

Under 1 year	—Glands, 2; Joints, 1; Other Forms, 2	5
1- 5 years	—Meningitis, 13; Abdomen, 20; Glands, 4; Joints, 3; Other Forms, 14 ...	54
5-15	„ —Meningitis, 4; Abdomen, 11; Glands, 9; Joints, 3; Spine, 1; Other Forms, 8	36
15-25	„ —Meningitis, 2; Abdomen, 5; Glands, 4; Joints, 4; Spine, 1; Other Forms, 9	25
25-45	„ —Abdomen, 2; Glands, 2; Joints, 1; Other Forms, 14 ...	19
45-65	„ —Glands, 1; Joints, 1; Other Forms, 6	8
65 years and upwards	—Other Forms, 2 ...	2
		149

The following are the particulars as regards the housing of the non-pulmonary cases :—

No. of rooms.	No. of cases.	Total No. of Inmates.	No. of Inmates per room.
1	19	85	4.5
2	95	504	2.65
3	16	109	2.26
4 and upwards	6	45	1.8

2 cases lived in lodging-houses.

11 cases were visited and home conditions were found satisfactory.

Compared with the figures of 1923 the number of cases notified this year as suffering from tuberculosis again shows a further decrease, in both pulmonary and non-pulmonary forms.

The figures are very gratifying, and are evidence that our scheme is founded on sound principles, and give us every encouragement not to relax our efforts, but rather to pursue our course with increasing vigour.

During the year 721 new cases were enrolled as compared with 697 in the year 1923. Of these 167 were found to be suffering from distinct phthisis (80 males and 87 females). 204 were found not to have the disease. In 339 cases the signs were somewhat indefinite; but these cases were regarded as the pre-tubercular stage: 6 cases were found to be suffering from other forms of tuberculosis, and 5 were not examined.

There were 159 contacts examined, 9 were found to be suffering from pulmonary tuberculosis, 1 was found to be suffering from non-pulmonary tuberculosis, and 1 was found to be suffering from both pulmonary and non-pulmonary tuberculosis, 78 were suspicious and are being kept under observation, the remaining 70 were found to be negative.

Of the 167 cases of definite phthisis, 77 were previously notified and 90 were notified from the Dispensary for the first time.

The ages and sex of these were as follows:—

Age.		Males.	Females.	Total.
1- 5 years	...	13	4	17
5-15	„	19	19	38
15-25	„	18	23	41
25-45	„	18	29	47
45-65	„	10	11	21
65 years and upwards		2	1	3
Total ...		80	87	167

The attendances at the Dispensary were as follows:—

		Insured.	Non-Insured.	Total.
January	...	961	846	1,807
February	...	929	791	1,720
March	...	954	922	1,876
April	...	849	619	1,468
May	...	874	641	1,515
June	...	822	703	1,525
July	...	699	486	1,185
August	...	713	465	1,178
September	...	730	740	1,470
October	...	804	813	1,617
November	...	711	829	1,540
December	...	743	930	1,673
		9,789	8,785	18,574

The attendances at the Dispensary were less. The figures show that the number of insured patients is markedly reduced, while the number of non-insured patients, i.e., mainly children, shows a considerable increase. The majority of these children are in the so-called “Pre-tubercular” stage and much benefit is derived from their supervision.

I am much gratified by the increase in the number of contacts examined. This is a very important part of our work, as it is amongst contacts that early cases will be discovered.

LABORATORY WORK.

During the year 562 Specimens of Sputum were examined with the following results:—

		Positive.	Negative.
63 for General Practitioners	...	16	47
499 for Dispensary Patients	...	51	448

ASHLUDIE SANATORIUM.

During the year there were 105 cases admitted to this Institution. Of these 44 were males and 61 were females. 104 patients were discharged (44 males and 60 females). Average stay in Institution—165 days.

The following shows the result of the treatment of these cases :—

		Very much Improved.	Improved.	Slight Improvement.	No Change
Males	...	13	16	5	7
Females	...	10	24	4	19

Of the 104 patients discharged, 1 female was sent out for surgical treatment and 4 males and 1 female died before discharge, 77 are still alive and 21 have died since discharge.

Gratifying results have been obtained at Ashludie Sanatorium, which shows that the patients are taking full advantage of the opportunities afforded.

KING'S CROSS HOSPITAL.

During the year 129 cases were admitted to this Institution. Of these 64 were males and 65 were females. 58 patients died (32 males and 26 females) and 65 were discharged, many of these greatly improved. On 1st January, 1925, there were 52 cases remaining in Hospital.

The ages and sex of the fatal cases were :—

Age.		Males.	Females.
Under 1 year	...	0	0
1- 5 years	...	1	1
5-15	...	1	1
15-25	...	11	10
25-45	...	16	12
45-65	...	3	1
Over 65	...	0	1

Again I would point out that the demand for beds for the non-pulmonary type of tuberculosis is increasing steadily and is a severe tax on the accommodation provided.

SIDLAW SANATORIUM.

During the year there were altogether 40 cases from the City under treatment in this Institution. 20 of these were males and 20 were females. There were 28 cases discharged (10 males and 18 females). Average stay in Sanatorium—190 days.

The following table shows the result of the treatment in these cases :

Improved.	Arrested.	Slight Improvement.	No Improvement.
14	4	4	6

Full advantage has been taken of the beds in Sidlaw Sanatorium, which are of the greatest value and help materially to meet the needs of the school child. I visited this Institution on several occasions and satisfied myself that everything was done for the welfare of the children.

I would here record my highest appreciation of the courtesy and helpful services of the visiting and residential staffs.

J. H. HUNTER, M.B., Ch.B., D.P.H.

Child Welfare Scheme.

Dr Margaret Scott Dickson's Report:

also Reports by

Dr. H. Gordon Campbell

Dr. Margaret Fairlie and

Dr. Andrewina Laird.

MATERNAL AND CHILD WELFARE SCHEME.

There have been no alterations in the general scheme of the work of the Department during the year.

HOME VISITING.—The usual visits to the homes have been carried out by the health visitors as in former years.

In November, owing to the severe epidemic of measles, two temporary health visitors were appointed to visit the children in their own homes and to carry out any special treatment ordered by the medical attendants, as well as to advise the mothers as to the prevention of infection.

During the year one health visitor left to go to New Zealand, and another was appointed to take her place.

CHILD WELFARE CONSULTATIONS.—Six weekly sessions of two and a half hours each have been held and the Weighing Centre in Broughty Ferry has been open once a week for two and a half hours with medical consultations once a month.

CONSULTATIONS FOR MOTHERS.—Minor ailments of nursing mothers are treated at the Branch Clinics at the ordinary Child Welfare Consultations; and, in addition, at the Central Clinic two special sessions per week of one hour each for mothers only are held.

SPECIAL CLINICS.—The Dental, Ante-Natal, and V.D. Clinics were carried on as before and the increase in the attendances at these Special Clinics is particularly gratifying and is dealt with in the Reports of the Special Medical Officers.

DAY NURSERIES.—The four Day Nurseries have been open during all the working hours of the factories in the city.

The charges made are 4/- a week of 5 days for 1 child, 7/- for 2 children, and 10/- for 3 children from the same family, with a charge of sixpence for Saturday, and tenpence for any single day for each child. The total payments made by the mothers during 1924 amounted to £329 15s 5d.

The total attendances at the Clinics have increased by over 1,100 notwithstanding the fact that during the last two months of the year large numbers of children had to be excluded on account of measles.

With the present premises and staff it is impossible to deal with much larger numbers at the ordinary clinics, as in some districts,—particularly in Blackness Road Clinic—the congestion resulting from the inadequate waiting room accommodation makes it difficult to carry out the work satisfactorily and is fatiguing to the mothers as well as to the workers. If it were possible to secure larger premises, the numbers could be very considerably increased.

As in former years, special enquiry was made into the effect on the nutrition of the infants of industrial work carried on habitually by the mothers. Contrary to the experience of former years, no conclusive figures were obtained so the corresponding tables of statistics have been omitted. This is probably due to the general improvement in the industrial conditions in the City; and further evidence of this is forthcoming in the fact that practically no applications were received for free food except from the mothers attending the clinics regularly, all of which is given on the recommendation of the medical officer and on medical grounds only.

REPORT OF CASES ADMITTED TO THE CLINICS.

ATTENDANCES.

CLINIC.	Babies.		Children 1 to 5 Years.			Mothers.				Total.	Total for 1923.		
	V. 1.	V. 2.	V. 1.	V. 2.	V. 3. *	V. 1.		V. 2.					
						A. N.	P. N.	A. N.	P. N.				
Victoria Road -	275	2359	43	287	1182	1	10	3	16	4176	3223		
Lochee - -	124	1415	34	196	1132	...	7	...	18	2926	2929		
Caldrum Street -	94	1139	11	95	682	...	3	...	0	2024	1808		
Princes Street -	112	1196	19	201	718	1	9	...	8	2264	2351		
Blackness Road	216	2033	26	126	1111	...	11	...	13	3536	3991		
Broughty Ferry	34	394	...	...	321	...	...	...	...	749	786
Dental Clinic -	1	...	30	29	...	3	23	6	52	144	87		
Anti-Natal Clinic	...	...	...	...	...	131	45	212	40	428	335
V. D. Clinic -	25	40	7	113	8	8	28	66	667	962	560		
	881	8576	170	1047	5154	144	136	287	814	17209	16070		
Relief Cases—1st Visits 17; Revisits, 4.										Total		21	17230

*V3 Visits of children between 1 and 5 years of age who were admitted as babies and are still attending.

CASES ADMITTED TO HOSPITAL FROM THE CLINIC.

Hospital.	Babies.	Children 1-5 Years.	Total.
Infant Hospital - - -	62	22	84
Dundee Royal Infirmary - -	1	1	2
King's Cross Hospital - -	2	4	6
Comerton Home - - -	...	1	1
	65	28	93

	Babies.	Children 1-5 Years.	Total
Died -	59	74	133
Left Town	5	15	20

Statistics as to weight of babies on admission to the 5 principal centres with reference to feeding:—

	Av (1)	- (2)	+ (3)	Not Weighed.	TOTAL.
Breast-fed	21 4%	138 26·2%	362 68·8%	5 ·9%	526
Partly breast-fed	3 4·28%	33 47·14%	34 48·57%	0 ...	70
Breast-fed for 1st 3 months	1 7·7%	8 61·7%	4 30·7%	0 ...	13
Fresh Cow's milk	3 2·63%	80 70·1%	30 26·31%	1 ·87%	114
Dried milk or artificial food	5 5·1%	58 59·18%	35 35·71%	0 ...	98
	33 4%	317 38·6%	465 56·6%	6 ·7%	821

(1) Av. = Average weight for age. (2) - = Under average weight for age

(3) + = Over average weight for age.

Health of Babies on Admission:—

25 babies (3 per cent.) showed no disease or defect

The remaining 796 showed a total of 2,288 diseases or defects, classified as follows:—

Diseases of digestive system	...	...	...	1,133
Diseases of respiratory system	...	...	...	234
Diseases of nervous system	...	...	...	3
Diseases of nutrition:—				
(1) Rickets	...	...	...	5
(2) Marasmus	...	...	...	11
(3) Anæmia	...	...	...	3
(4) Congenital syphilis	...	...	...	6
			—	25
Diseases of the skin	...	...	...	302
Diseases of the eye	...	...	...	42
Diseases of the ear, nose and throat	...	...	...	9
Surgical Diseases	...	...	...	25
Infectious diseases (chickenpox)	...	...	...	3
Congenital defects	...	...	...	484
Various	...	...	...	28

2,288

Statistics showing relation of feeding to special diseases of nutrition :—

	Not Exam.	No Disease.	Rick-ets.	Mar-asmus.	Anæmia.	Digestive Diseases.	Other Diseases	Total.
Wholly breast-fed	0 ...	17 3·2%	3 ·5%	1 ·2%	2 ·3%	413 78·5%	90 17·1%	526
Partly breast-fed	0 ...	4 5·7%	0 ...	0 ...	0 ...	57 81·4%	9 12·8%	70
Breast-fed for 3 mths.	0 ...	1 7·7%	1 7·7%	1 7·7%	0 ...	9 69·2%	1 7·7%	13
Fresh Cow's Milk	0 ...	2 1·7%	1 ·8%	5 4·3%	0 ...	93 81·5%	13 11·4%	114
Dried Milk or Artificial Food	0 ...	1 1%	0 ...	4 4%	1 1%	83 84·7%	9 9·1%	98
Totals	0	25 3%	5 ·6%	11 1·3%	3 ·3%	655 79·7%	122 14·8%	821

CHILDREN 1-5 YEARS.

66 males and 67 females were admitted, of which only 2 females showed no disease or defect.

The 66 males showed 165, and the remaining 65 females showed 147 diseases or defects classified as follows :—

	Male.	Female.	TOTAL.
Diseases of digestive system ...	16	15	31
Diseases of respiratory system ...	34	36	70
Diseases of nervous system ...	3	1	4
Diseases of nutrition:—			
Rickets ...	15	23	38
Marasmus ...	3	2	5
Anæmia ...	4	2	6
Debility ...	5	3	8
Diseases of the skin ...	17	19	36
Diseases of the eye ...	4	7	11
Diseases of the ear, nose and throat:—			
Adenoids ...	8	9	17
Enlarged tonsils ...	5	7	12
Various ...	5	2	7
Surgical diseases ...	10	10	20
Infectious diseases:—			
Tubercular peritonitis ...	1	1	2
Generalised T.B. abscesses ...	0	1	1
Congenital defects ...	27	3	30
Intestinal parasites ...	4	1	5
Advanced dental caries ...	1	2	3
Various ...	3	3	6
	165	147	312

SPECIAL NOTES ON THE INCIDENCE OF RICKETS.

Only 5 of the 821 babies under 1 year of age showed signs of rickets, but of the 133 children admitted to the Clinics for the first time between the ages of 1 and 5 years, 38 (28.5 per cent.) showed definite signs of the disease, the majority of the cases occurring between 1 and 2 years of age. Thus, of the total 38 cases recorded, 26 (68.4 per cent.) occurred between 1 and 2 years of age.

Very few children come to the Clinics for the first time between 3 and 5 years; and those who do, are usually brought on account of some acute or sub-acute illness and are often otherwise healthy.

In the case of the younger children (1-2 years) rickets was not diagnosed solely on account of delayed dentition or imperfect closure of the fontanelle unless these conditions were associated with other symptoms of the disease.

The type of child attending seems to have some influence on the prevalence of rickets. Thus in Victoria Road and Blackness Road Clinics where a large porportion of the children come from the poorer homes of the city, signs of rickets were recorded in 32.5 per cent. and 34.6 per cent. of the children respectively, while in Lochee, where the poorest mothers habitually work in factories and therefore can very rarely attend a clinic, the figure is only 23.5 per cent.

Consultations for Mothers :—
ANALYSIS OF CASES.

1. Ante-Natal	...	...	...	...	...	2
Dyspepsia	...	...	...	...	...	2
2. Post-Natal	...	...	...	...	...	40
Amenorrhœa	...	...	...	...	...	1
Menorrhagia	...	...	...	...	...	3
Cystitis	...	...	...	...	...	2
Hyperchloridia	...	...	...	...	...	1
Diarrhœa	...	...	...	...	...	1
Constipation	...	...	...	...	...	6
Flatulent Dyspepsia	...	...	...	...	...	1
Inflamed varix	...	...	...	...	...	1
Mastitis (right)	...	...	...	...	...	3
Mastitis (left)	...	...	...	...	...	3
Bronchial catarrh	...	...	...	...	...	2
Urticaria	...	...	...	...	...	1
Eczema of nipples	...	...	...	...	...	1
Subacute rheumatism	...	...	...	...	...	2
Neuralgia (right breast)	...	...	...	...	...	1
"Globus Hystericus"	...	...	...	...	...	1
Nervous debility	...	...	...	...	...	1
Debility	...	...	...	...	...	7
Anæmia	...	...	...	...	...	2
						40

All the cases received treatment at the Clinics.

ATTENDANCES AT DAY NURSERIES.

Day Nursery.	Re-admitted from 1923.			New Cases Admitted.			Total Attendances.			Average Daily Attendance.			No. of days open.
	*Babies	†Toddlers	Total.	*Babies	†Toddlers	Total.	*Babies	†Toddlers	Total.	Babies	†Toddlers	Total.	
St George's	8	16	24	29	34	63	2501	4153	6654	9	14	23	292
Hillbank	2	24	26	32	34	66	1598	4331	5929	5	15	20	292
Isles' Lane	11	6	17	16	12	28	2322	1712	4034	8	6	14	292
Lilybank	4	2	6	21	25	46	2391	2689	5080	8	9	17	292
	25	48	73	98	105	203	8812	12885	21697	29	44	74	292

* Under 2 years. † 2-5 years.

PROVISION OF FREE FOOD FOR NECESSITOUS CASES.

	Sold at Cost Price.	GIVEN FREE.				Number of Orders Given.		Total Amount Given.	
		New Cases.		Old Cases.					
		C.	R.C.	C.	R.C.	C.	R.C.	C.	R.C.
	Lbs.							Lbs.	Lbs.
Glaxo - - -	1585	2	...	3	...	22	...	102	...
Benger's Food -	1 Tin	...	...	...	...	...	...	...	...
Horlicks Malted Milk - - -	1 „ Tins	1	...	2	...	5	...	12	...
Virol - - -	722	2	...	1	...	7	...	21	...
Virolax - - -	243	4	...	1	...	6	...	10	...
								Pints	Pints.
Dairy Milk -	...	54	17	55	..	490	20	23,795	645.
Dinners at Priv- ate Restaurants	...	29	1	3	..	121	1	2705	27

Average Daily Attendance, 9 ; Number of Days Open, 301.

C.—Given on medical grounds only to necessitous mothers and children attending the clinics regularly.

R.C.—Granted by Relief Committee to mothers unable to attend clinics and given on account of necessitous circumstances only.

TOTAL COST OF FOOD
SUPPLIED FREE.

Dinners -	£102	9	0
Milk -	324	15	5
Other Foods -	11	3	8
	<u>£438</u>	<u>8</u>	<u>1</u>

AMOUNT RECEIVED FOR DRIED MILK, ETC.,
SOLD AT THE CLINICS AT COST PRICE.

Glaxo -	£125	14	0
Bengers -	0	2	3
H.M.M. -	0	3	6
Virol -	46	4	4
	<u>£172</u>	<u>4</u>	<u>1</u>

SCHOOL FOR MOTHERS.

Sewing Classes for Mothers were held in connection with four of the Clinics, but the average attendances were rather low on account of some of the members returning to work at irregular intervals.

The Department has once more to thank Miss Batting for her kind permission to use the Club Room at Grey Lodge for the Princes Street Class.

The report of the work done is as follows :—

Total number of classes held	...	...	...	101
Duration of each class	...	...	...	2 hours
Total number on Roll	...	...	...	207
Average attendance	...	...	...	87
Approximate number of garments made	...	...	...	392

SOCIAL WORK.

The members of the Dundee Voluntary Health Workers Association have continued their good work of making garments for the children attending the Clinics and the Day Nurseries, as well as visiting the Nurseries and assisting at the Clinics.

The Department acknowledges with gratitude its indebtedness to these ladies who have rendered such faithful and valuable service during all these past years.

In association with other friends they also provided children's garments as prizes for the mothers attending the clinics most regularly and for the Christmas Trees for the Day Nurseries.

The usual Party for clinic mothers was held in the Y.M.C.A. Hall in January, and over 500 mothers attended with their babies.

The Lord Provost and Mrs High were present, the latter kindly presenting the prizes for attendance to the successful mothers.

Several other members of the Town Council and their wives also came to show their interest in the mothers, which was greatly appreciated.

After tea had been served a cinematograph entertainment was given.

During the year 514 sewed and 444 knitted garments were made for the clinics and 253 garments were also supplied to the Day Nurseries.

The garments distributed to the mothers at the clinics numbered 705. Of these :—

325 were sold at cost price.

246 were sold at one-half cost price.

84 were sold at one-quarter cost price.

50 were given free to necessitous cases.

Particulars of Births Notified and Registered in 1924.

Total Births received from Registrars	...	3,948	
Registered in 1924 but already notified in 1923		81	
		—	3,867
Notified in 1924 but not registered until 1925		96	
		—	3,963
Still Births	... ..	198	
		—	4,161
Registered in Dundee but born (and notified) elsewhere	... ..	24	
		—	4,137
Unnotified	... ..	245	
		—	3,892
Total Notifications received by the Department in 1924	... ..	3,892	

Thus, of a total of 4,137 births occurring in Dundee during 1924, 3,892 or 94 per cent. were notified, and of the 3,948 live births which were registered in Dundee during 1924, 3,679 or 93.1 per cent. were notified either previous to or during 1924.

NOTIFICATIONS.

By whom notified.	Notified.	Unnotified.	Total.	Total cases attended.	Percentage of total births.
Doctors	501	223	724	1,159	28.0
Dr. and Midwife	63	—	63	63	1.5
Maternity Hosp.—					
(I.P.) } ...	1,269	12	1,281	1,281	30.9
(O.P.) }					
Midwives	1,603	3	1,606	1,606	38.8
E.P. Hospital	17	2	19	19	.4
Handywomen	2	2	4	6	.1
Parents	214	—	214	—	—
Other sources	223	—	223	—	—
Born out of town	—	24	24	—	—
Concealed preg.	—	2	2	—	—
Unknown—					
(found dead)	—	1	1	—	—
	—	—	—	—	—
	3,892	269	4,161	4,134	99.7

OPHTHALMIA NEONATORUM.

	Doctors.	Mid-wives.	Maternity Hospital.		Handy Women.	Dr. and Midwife.	C.W. Dept.	Eye Inst.	E. P. Hospital.	Various.	Total.
			In Pat.	Out-Pat.							
By whom notified	13	20	4	62	0	17	4	2	2	0	124
By whom attended	6	36	5	64	0	11	0	0	2	0	124
Total No of Births attended in 1924	1159	1606	1281		6	63	0	0	19	27	4161

Admitted to Hospital.	Treated at Home.	Left Town.	Type of Case.		Result.				Home Visits Paid by Health Visitors.	
			Severe	Mild.	Complete Recovery	Injury to Eyes.	Died during Treatment.	Unknown Not Visited.	Initial Visits.	Re-visits.
7	115	0	17	105	117	3	2	2	122	1124

2 Cases were born and treated in the East Poor-house Hospital (not visited):—

1 Mild.

1 Severe (infant died during treatment) Congenital Debility.

The 17 cases of severe type were attended at birth as follows:—

Midwives	...	...	...	...	7 cases.
Maternity Ward (O.P.)	...	...	...	...	5 „
Doctor and Midwife	...	...	...	...	3 „
Doctor	...	...	...	...	2 „

7 cases of the severe type were admitted to Hospital:—

6 cases were admitted to King's Cross Hospital.

1 case was admitted to Dundee Royal Infirmary.

In 3 cases the eyes were damaged:—

1 case total loss of vision (both eyes).

1 case partial impairment (both eyes).

1 case right eye damaged (Traumatic injury).

PUERPERAL DEATHS.

Deaths of women from diseases and accidents connected with pregnancy and childbirth.

There were 28 deaths of women under this heading :—

Puerperal Sepsis	...	...	...	...	4
Lobar Pneumonia	...	...	...	...	1
Broncho-Pneumonia	...	...	...	...	2
Influenzal Pneumonia	...	...	...	...	1
Eclampsia	...	...	...	...	2
Eclampsia with adherent placenta	...	...	...	...	1
Lobar pneumonia and mitral Stenosis	...	...	...	...	1
Chronic nephritis, br-pneumonia, terminal pericarditis	...	...	...	...	1
Placenta prævia, ante-partum hæmorrhage	...	...	...	...	1
Adherent placenta, post-partum hæmorrhage with acute inversion of uterus	...	...	...	...	1
Uterine hæmorrhage, Shock, cardiac failure	...	...	...	...	1
Myocarditis, laryngitis	...	...	...	...	1
Pernicious anæmia	...	...	...	...	1
Pulmonary tuberculosis, Debility after confinement	...	...	...	...	1
Debility, general peritonitis after central placenta prævia	...	...	...	...	1
Peritonitis following cæsarian section	...	...	...	...	1
Uræmia following eclampsia	...	...	...	...	1
Eclampsia, puerperal sepsis, pneumonia	...	...	...	...	1
Placenta prævia (6½ months) pregnancy, died in labour (undelivered)	...	...	...	...	1

Died during Pregnancy.

Embolism	...	...	...	...	1
Basal meningitis, br-pneumonia, enteritis	...	...	...	...	1
Eclampsia	...	...	...	...	1
Retro-peritoneal hæmorrhage	...	...	...	...	1

21 cases of puerperal sepsis came under the notice of the Maternity and Child Welfare Department.

5 died.

16 recovered.

PUERPERAL SEPSIS—21 CASES.

Attendant at Birth.	Total No. of births attend- ed in 1924.	Notified.	Un-notified.	Multiparae.	Primiparae.	Admitted to Hospital.	Nursed at Home.	Recovered.	Died.	Total.
Maternity Hospital										
Outpatient - - -	1281	0	0	0	0	0	0	0	0	0
Inpatient - - -		2	...	2	...	1	1	2	..	2
Doctors - - - -	1159	8	2	6	4	4	6	5	3 M. 2 P.	10
Midwives - - - -	1606	8	...	7	1	5	3	8	0	8
Doctor and Midwife - -	63	1	...	...	1	...	1	1	...	1
Handy-women - - - -	6	...	...	...	...	...	...	...	...	0
East Poorhouse Hospital -	19	...	...	...	...	...	...	...	...	0
Born Out of Town - -	24	...	...	...	...	...	...	...	...	0
Concealed Pregnancy -	2	...	...	...	...	...	...	...	...	0
Unknown—Found Dead -	1	..	...	...	...	...	...	...	...	0
Total - - - -	4161	19	2	15	6	10	11	16	5	21

PARTICULARS OF CASES.

Normal confinements	...	...	...	...	...	10
Instrumental delivery	...	...	...	...	...	2
Instrumental delivery with ruptured perineum	...	...	...	...	...	1
Instrumental delivery and in contact with scarlet fever	...	...	...	...	...	1
Instrumental delivery with eclampsia	...	...	...	...	...	1
Precipitate labour	...	...	...	...	...	1
Malignant chorion	...	...	...	...	...	1
Gangrenous patch placenta (6 months foetus)	...	...	...	...	...	1
Ruptured perineum	...	...	...	...	...	2
Instrumental delivery with ruptured perineum and gonorrhoea	...	...	...	...	...	1

RECOVERED.

DIED.

Multip. Primip. Multip. Primip.

Where delivered:—

Home	...	...	12	4	3	2
Maternity Ward...	...	...	0	0	0	0

Where treated:—

Home	...	...	7	3	0	0
Maternity Ward...	...	...	5	1	3	2

Conditions of Home:—

Good	...	...	8	3	3	2
Bad	...	...	4	1	0	0

INFANT DEATH STATISTICS, 1924.

332 deaths occurred in children over one year and under 5 years.

465 deaths occurred in children under one year distributed as follows :—

1st week.	2nd week.	3rd week.	4th week.	1 3 mths.	3-6 mths.	6-9 mths.	9 12 mths.	Total.
120	37	17	17	79	77	61	57	465

Of these 198 were breast fed.

120 were artificially fed.

48 were partly breast fed (mixed feeding).

In 69 cases infant feeding was not commenced due to prematurity.

29 cases were not visited.

1 case no particulars were available.

Regarding feeding, the ages at which those infants died were as follows :—

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9-12 Months	Total		N. V.	N. P.
Breast ...	76	29	12	16	5	9	12	6	33	198	69	29	1
Mixed ...	5	7	7	1	4	6	1	3	14	48	..	..	..
Artificial ...	24	21	16	7	12	10	5	8	17	120	..	..	..
Total	105	57	35	24	21	25	18	17	64	366	69	29	1

HOUSING.

Of the 435 deaths in which particulars were obtained :—

148 occurred in houses of one room in which there were 537 occupants.

250 occurred in houses of two rooms in which there were 1,273 occupants.

23 occurred in houses of three rooms in which there were 121 occupants.

9 occurred in houses of four rooms in which there were 51 occupants.

5 occurred in lodging houses or institutions.

FAMILY HISTORY.

The family history showed that in these families 866 children were still alive, but 750 had died, and of these no fewer than 651 had died in the first year of life.

In the 435 cases in which particulars were obtained 193 mothers were engaged in work outside their own homes; 242 were not thus employed.

In 30 cases the mother left work one week before confinement.

" 4	"	"	"	two weeks	"	"
" 6	"	"	"	three	"	"
" 2	"	"	"	four	"	"

52 children who died were illegitimate.

60 children who died were twin births.

119 deaths were due to prematurity.

SPECIAL INQUIRY INTO DEATHS DUE TO DIARRHŒA

45 deaths occurred from diarrhœa during 1924 :—

21 were breast fed.

5 were partly breast fed (mixed feeding).

18 were artificially fed.

1 was not visited.

	1st Month	2nd Month	3rd Month	4th Month	5th Month	6th Month	7th Month	8th Month	9-12 Months	Total	N.V.	N.P.
Breast ...	2	6	2	3	1	2	2	0	3	21	1	...
Mixed ...	1	2	0	0	1	1	0	0	0	5	...	...
Artificial ...	2	4	2	4	1	0	2	0	3	18	...	...
Total ...	5	12	4	7	3	3	4	0	6	44	1	...

The family history showed that in these families 83 children were still alive, 76 had died and no fewer than 64 had died in the first year of life.

20 mothers had worked during pregnancy.

24 mothers were not engaged in outside employment.

HOUSING.

Of the 44 deaths from diarrhœa in which particulars were obtained :—

21 occurred in houses of one room in which there were 78 occupants.

18 occurred in houses of two rooms in which there were 93 occupants.

3 occurred in houses of three rooms in which there were 20 occupants.

2 occurred in houses of four rooms in which there were 12 occupants.

1 case was not visited.

HEALTH VISITORS' WORK.

Ordinary Visits:—

	Initial Visits.	Re-Visits.	Total.
Infants	3,547	12,457	16,004
Children: 1-5 years	1	9,414	9,415
Mothers—			
A.N.	9	4	13
P.N.	13	13	26

	Initial Visits.	Re-Visits.	Total.
Measles—			
Under 1 year ...	108	—	—
1-5 years ...	867—1,687	1,051	2,738
Over 5 years ...	712	—	—
Whooping Cough—			
Under 1 year ...	64	—	—
1-5 years ...	273—494	229	723
Over 5 years ...	157	—	—
Chickenpox—			
Under 1 year ...	9	—	—
1-5 years ...	20—31	13	44
Over 5 years ...	2	—	—
Ophthalmia Neonatorum	122	1,124	1,246
Puerperal Sepsis ...	15	6	21
	5,919	24,311	30,230

Of the 3,547 infants visited for first time:—

223 were premature births, and
3,324 were full-time births.

HOUSING.

Of the 3,547 homes of the newly born visited for the first time, the home conditions were as follows:—

255 were very good.
1,920 were good.
1,231 were medium.
141 were bad.

Special information as to the feeding of infants for the first six months of life was obtained in 2,864 cases, the particulars of which are as follows:—

(a) Breast fed	1,770
(b) Partly breast fed	355
(c) Artificially fed	739
	— 2,864

DEATHS FROM INFECTIOUS DISEASES.

	Under 1 year.	1-5 years.	Over 5 years.
Measles ...	22	91	3
Whooping cough	16	19	0

MARGARET SCOTT-DICKSON,
M.B., Ch.B., D.P.H.

Report of the Dental Clinic.

I beg to submit my Annual Report for 1924.

I am glad to say that there is a marked increase in the number of attendances over last year, but I still regret that more patients do not take advantage of the services at the Clinic.

I would once more like to thank Dr. Scott-Dickson, Dr. Margaret Fairlie, and Nurse Jameson for the help and interest in the welfare of the patients attending the Clinic.

The following are the details of attendances, etc.—

ATTENDANCES.

	Babies.	Children.	MOTHERS.		Total.
			A.N.	P.N.	
New Cases ...	1	30	3	23	67
Re-Visits ...	0	29	6	52	87

TREATMENT.

	Babies.	Children.	MOTHERS.		Total.
			A.N.	P.N.	
Per. extractions	0	0	10	56	66
Tem. extractions	0	12	0	0	12
Fillings ...	0	3	1	33	37
Scalings ...	0	1	0	4	5
Dressings ...	0	51	0	2	53
Advice ...	1	19	0	0	20
Dentures ...	0	0	0	2	2
Genl. Anæsthetic	0	0	0	0	0
Refu'd. Treatment	0	0	0	0	0
Number of dentures supplied ...			2		
Cost of Dentures supplied ...			£9	0	0
Sums recovered from mothers ...			8	3	6
<hr/>					
Nett cost of Dentures supplied ...			...	...	£0 16 6

H. GORDON CAMPBELL,
L.R.C.P. & S.E., L.D.S.

Report of the Ante-Natal Clinic.

The most satisfactory feature in this, the fifth annual report of the Ante-Natal Clinic, is the evidence of the regularity with which patients attend after their first visit.

The midwives are now responsible for a large proportion of the women who seek advice but they are still faced with the difficulties of prevailing on expectant mothers to attend for examination, who have otherwise no complaints.

The attendance fluctuates, but the average daily number is eight.

The Clinic is open once weekly, and the duration of each session is two hours.

ANALYSIS OF REPORT.

Total number of visits—

New cases	...	...	...	...	...	176	
Re-visits	...	...	...	...	...	252	
						—	428

New Cases—

Ante-natal	...	...	...	...	...	130	
Post-natal	...	...	...	...	...	43	
Not pregnant	...	...	...	...	...	3	

Re-Visits—

Ante-natal	...	...	...	...	...	212	
Post-natal	...	...	...	...	...	40	
						—	428

Treatment of Patients—

Ante-Natal—142.

Referred to Ante-natal Ward	...	...	...	9	
Referred to family doctor	...	...	...	3	
Treated at Clinic	...	...	...	130	
(60 advice only)				—	142

Post-Natal—53.

Referred to D.R.I.	...	...	...	3	
Referred to family doctor	...	...	...	3	
Treated at Clinic	...	...	...	47	
(13 advice only)				—	53

ANALYSIS OF CASES.

Ante-Natal—

Advice (No complaint)	...	...	...	60
Conditions due to Pregnancy—				
Albuminuria	...	...	...	3
Ante-partum hæmorrhage (A.P.H. threatened miscarriage)	...	...	...	4
Hydramnios	...	...	...	1
Vomiting	...	...	...	6
Oedema	...	...	...	2
Conditions aggravated by Pregnancy—				
Varix	...	...	...	14
Conditions complicating Pregnancy—				
Contracted pelvis	...	...	...	2
Malpresentation	...	...	...	4
Discharge (purulent)	...	...	...	2
Dental caries	...	...	...	2
Constipation	...	...	...	12
Respiratory	...	...	...	3
Cardiac	...	...	...	2
Various	...	...	...	7
Refused examination	...	...	...	1
Specific Diseases—				
Wassermann Positive	...	...	...	3
Gonorrhœa	...	...	...	2
				— 130

Post-Natal—

Advice	...	...	...	13
Menopause	...	...	...	3
Endometritis	...	...	...	6
Retroversion	...	...	...	7
Prolapse	...	...	...	3
Leucorrhœa	...	...	...	2
Complete Abortion	...	...	...	1
Constipation	...	...	...	3
Hæmorrhoids	...	...	...	1
Caruncle	...	...	...	1
Cracked nipples	...	...	...	1
Specific Disease:—				
Wassermann Positive	...	...	...	2
				— 43
Not Pregnant:—				
Advice	...	...	...	1
Retroversion	...	...	...	1
Menorrhagia	...	...	...	1
				— 3
				176

Report on Special V.D. Clinic.

The attendances have increased greatly during the last year. The increase is most noticeable in the number of revisits, the number of new patients showing a decrease over that of the previous year.

This increase in attendance is very gratifying as it shows the patients are realising the advantage they derive from treatment.

I should like to thank the health visitors for the way in which they have endeavoured to persuade the mothers to take advantage of the facilities provided for their treatment at this Clinic.

ANALYSIS OF NEW CASES.

Adults.

Venereal Diseases—

Gonorrhœa	...	...	...	...	13
Syphilis	...	...	...	...	3
Mixed infection (syph. and gonor.)	...				3
					— 19

Not suffering from V.D.—

Leucorrhœa	...	...	...	...	7
Tuberculosis	...	...	...	...	1
Headaches	...	...	...	...	1
Contact cases	...	...	...	...	4
Eczema	...	...	...	...	1
Neuritis	...	...	...	...	1
Furunculosis	...	...	...	...	1
					— 16
					— 35

Children.

Venereal Diseases—

Syphilis	...	...	...	...	3
Vulvo-vaginitis	...	...	...	...	2
"Marasmus"	...	...	...	...	8
					— 13

Not suffering from V.D.—

Laryngitis	...	...	...	...	2
Bronchial catarrh	...	...	...	...	2
Bronchial catarrh and otorrhœa	...	...	...	...	1
Jaundice	...	...	...	...	1
Gastro-enteritis	...	...	...	...	3
Psoriasis	...	...	...	...	1
Papular rash	...	...	...	...	4
Pemphigus	...	...	...	...	2
Balanitis	...	...	...	...	1
Mongol	...	...	...	...	1
Dyspepsia	...	...	...	...	1
					— 19
					— 32

Wassermann Tests	...	...	...	...	66
Gonococcus complement fixation tests	...	...	...	...	29
Microscopical examinations	...	...	...	...	32
				—	129
Doses of salvarsan substitutes administered	...	...	...	...	50
Special vaccines administered	...	...	...	...	36
Doses of bicreol administered	...	...	...	...	12

ANDREWINA LAIRD, M.B., Ch.B., D.P.H.

Venereal Diseases Scheme.

Dr. Charles Averill's Report.

Dundee Venereal Diseases Scheme.

The following is a report of the work carried out under this scheme for 1924.

Throughout the year the work has been done at three different Institutions. The male patients have received treatment at the new "ad hoc" clinic, 1 Fleuchar Street, Polepark, this being the first complete year of the working of this clinic and the first time in this city that patients have been treated for V.D. in an institution for that purpose only. This will be referred to later. The female patients, as in previous years, have received treatment in premises set aside for this purpose at the Dundee Royal Infirmary. A small clinic for nursing mothers and their children has been in operation throughout the year at the Child Welfare Centre, Nelson Street.

Before passing on to an analysis of the work done, it is perhaps advisable to say a few words with regard to the new clinic at Fleuchar Street. As stated, this is the first complete year of this clinic being in operation. The male clinic, formerly conducted at the Dundee Royal Infirmary, was removed to Polepark on the 16th November, 1923.

To date, the new method of treating venereal diseases at a clinic for that purpose only has exceeded all expectations. At its inception, one was inclined to be afraid that the institution of such a scheme for the treatment of conditions to which, unfortunately, there is still attached a very marked social stigma, might be a failure or at least disappointing. Particularly did one feel so as the building was in a fairly public place, had an extremely exposed entrance, and was not too conveniently situated for the other parts of the city. In spite of these undoubted disadvantages, the patients have sought advice and treatment to a degree that has been pleasantly surprising. It remains to be seen if this state of affairs will continue. Much, however, still remains to be done in the way of supplying more satisfactory and convenient accommodation. It is felt that there are many more patients requiring treatment than present themselves. I believe that, with premises more conveniently situated and utilised for other clinical purposes at the same time, more people would avail

themselves of the greater facilities offered. From the results of the male clinic, I think it may be safely surmised that, if the clinics were organised in conjunction with some other section of the Public Health Service, the female patients would attend for advice and treatment just as regularly as the male patients have done. Moreover, a combination of both clinics is to be desired from the point of view of efficiency in administration and economy.

The total number of new patients who reported during the year was 765; an increase of 31 over the previous year. Of these, there were 455 male and 310 female cases, the male patients showing an increase of 48 over the previous year.

For the year Syphilis showed a definite decrease while, on the other hand, Gonorrhœa manifested a decided increase. A feature of some interest was the number of patients who presented themselves for examination and who were found to be quite free from any form of venereal infection. This number rose from 52 in 1923 to 128 in 1924.

The attendances per patient increased by about 20 per cent. This was chiefly due to the better facilities which were offered the male patients for certain forms of treatment, although the increase was participated in by the female clinic as well.

The question of in-patient treatment is not yet on a satisfactory basis. Undoubtedly much has been accomplished in the case of the male patients, as there is now accommodation for at least 6 patients. Advantage was taken of these beds on several occasions throughout the year. The number of in-patient days amounted to 45. With regard to female in-patient treatment, much remains to be done and this phase of the matter is probably more important in dealing with female than male cases. I am of opinion that this could be quite effectively carried out in a ward set aside in another institution, away from the outdoor clinic altogether. It is hoped that this will receive early and sympathetic consideration.

The total attendances for the year have been very satisfactory and both clinics have shown an increase

over 1923. The total attendances in 1924 were, female 11,983; male 14,841. This shows a total increase, compared with 1923, of 4,745.

It cannot be said that the patients suffering from any of the various forms of venereal disease are reporting earlier than in previous years. This is greatly to be deprecated as the longer the disease goes on before treatment is commenced, the longer will the patient have to attend for treatment and the more difficult will it be to establish a cure.

Of the the cases infected with gonorrhœa, less than 9 per cent. were seen early on in the disease, while in the remaining number, the condition was well established before advice had been sought. It is worthy of note that in those who presented themselves for treatment early in the disease, the percentage of complications was lower than in those who applied for treatment later on.

In the case of syphilis a fuller analysis has been made of the various stages of the disease at which the patients reported. It is now well recognised that the ideal period at which to commence the treatment of syphilis is in the pre-Wassermann stage; i.e., when the "Dark Ground" is positive but while the Wassermann is still negative. Of the new cases only 10.4 per cent. were of this character. With "Dark Ground" positive and Wassermann positive there were 6.2 per cent. Cases of well marked secondary syphilis and those with late manifestations were respectively 29 per cent. and 52 per cent. One cannot refrain from remarking that these latter numbers are just as much too high as the first number is much too low. Only one per cent. of the new cases showed involvement of the central nervous system traceable to syphilis. I am inclined to think that this number is much too low and that there are many such cases for which little, if anything, is done in the way of anti-syphilitic treatment. Certainly, one does not expect complete recovery, but still much can be done to ameliorate the general condition of the patient.

One is struck by the paucity of cases of Congenital Syphilis which come up for treatment. Why this is so, is difficult to understand. There is ample facility for

the treatment of such cases, and something can always be done for the general condition of such patients by means of antisyphilitic treatment.

So much clinical work has necessarily entailed a correspondingly large amount of bacteriological work and for this I have to express my thanks to Professor Tulloch and his assistants. I have also to acknowledge the work done for me on a large number of specimens from patients showing a persistently positive Wassermann and also from a large number of patients with late syphilis who originally presented themselves at the clinic as such. I have only been able to control the treatment of these cases and keep them under satisfactory observation by means of the precipitation tests which have been frequently done upon their different sera. I have found the reports of extreme value and assistance in dealing with such cases.

In the treatment of syphilis, the newer preparation—bismuth, has been extensively tried throughout the year. This preparation appears to be more potent than mercury. In my experience it is better tolerated by the majority of patients and numerous cases that have proved resistant to other treatment have eventually reacted most favourably to this substance. I have now to a very large degree replaced the use of mercury by metallic bismuth.

Every case of syphilis is treated with one of the salvarsan compounds intravenously and a metal intramuscularly, preferably bismuth. Except when otherwise indicated, I always gave the two at each visit, and an average course usually consists of, in the male, 10 of each, and in the female, 8 of each. Allowing a suitable interval to elapse after the first course, I usually give a second course similar to the first. As a working basis, I find this procedure gives satisfactory results.

During the year several methods, in addition to lavage, have been tried in the treatment of Gonorrhœa but without any very encouraging results. One is compelled to admit that the ideal cure for Gonorrhœa is not yet to hand, and that the best that can be done at present is to adhere to the well-known and well-tried method of lavage. One is inclined to think that if this

method were only applied in all cases sufficiently early on in the disease, much would be done to, at least, diminish the incidence of the complications of this condition.

Very little opportunity has been granted to treat any cases prophylactically, but in such as have presented themselves for such treatment, the results have been satisfactory. They may not have been infected; certainly they did not develop anything later.

The chief preparations used have been the salvarsan compounds for intravenous use and mercury and bismuth for intramuscular use. Other preparations have been used fairly extensively, such as contramine, intramine, electrargol, etc.

Patients suffering from syphilis are usually kept under observation for, at least, 3 years, allowing roughly one year for active treatment and two years free from all symptoms and accompanied by a persistently negative Wassermann. An attempt has been made to control certain cases by an examination of the C.S.F., but as the withdrawal of C.S.F. is not always unaccompanied by a certain amount of discomfort to the patient, a good deal still requires to be done in the way of educating the patient up to the point of realising that a lumbar puncture is just as important as the taking of a sample of blood for a Wassermann, a procedure which all patients nowadays seem to expect and frequently ask for. It is felt that if a routine examination of the C.S.F. were possible, much might be done to reduce the incidence of central nervous syphilis. It would allow one to detect cases of early neuro-syphilis at the stage when something might be done which cannot be done later.

With regard to gonorrhœa, I have, in the case of male patients, adopted the method of keeping them under observation for about two months after the cessation of all clinical symptoms. During this period the patients are examined frequently, both clinically and bacteriologically. In the case of female patients the period has been longer and greater use has been made of vaccines provocatively. In both cases, extensive use has been made of the Gonococcal Complement Fixation Test.

While the above figures are fairly satisfactory, there is still a number of patients who cease attending before their treatment is complete. This is a serious matter but it is extremely difficult to get certain patients to realise that, although the naked-eye lesions have disappeared, they may still be far from being cured. The only method of dealing with this aspect of the subject seems to be some form of control.

I wish to take this opportunity to thank my staff for unfailing attention in helping to make the working of the clinics both smooth and satisfactory.

C. AVERILL, M.A., B.Sc., M.D., D. P.H.

NEW CASES.

	DUNDEE.		OTHER AREAS.	
	Males.	Females.	Males.	Females.
January ...	38	20	0	1
February ...	41	26	2	2
March ...	40	24	1	3
April ...	34	13	0	2
May ...	29	31	7	1
June ...	28	34	5	4
July ...	27	29	3	1
August ...	42	26	3	2
September ...	34	15	2	4
October ...	40	24	2	2
November ...	33	19	2	1
December ...	35	25	7	1
Totals ...	421	286—707	34	24—58
Dundee ...	...	...	...	707
Other Areas ...	...	...	...	58
Total ...	...	...	...	765

Of these there were :—

DUNDEE.—Males.

	Syphilis.	Gonorrhœa	Mixed Infections.	Other V.D.	No. V.D.
January ...	13	18	2	2	3
February ...	16	15	0	4	6
March ...	9	23	1	0	7
April ...	9	16	1	4	4
May ...	10	15	0	0	4
June ...	7	17	0	3	1
July ...	9	9	2	1	6
August ...	11	26	0	2	3
September ...	9	19	0	2	4
October ...	10	21	1	2	6
November ...	11	17	3	1	1
December ...	7	15	1	3	9
Totals ...	121	211	11	24	54

Females.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	10	4	1	0	5
February ...	12	4	6	0	4
March ...	12	5	0	0	7
April ...	8	4	1	0	0
May ...	20	5	0	1	5
June ...	13	6	5	0	10
July ...	14	5	3	0	7
August ...	13	4	2	0	7
September ...	8	3	1	0	3
October ...	7	5	2	0	10
November ...	7	6	0	0	6
December ...	15	5	0	0	5
Totals ...	139	56	21	1	69

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	0	0	0	0	0
February ...	2	0	0	0	0
March ...	1	0	0	0	0
April ...	0	0	0	0	0
May ...	2	3	0	1	1
June ...	4	1	0	0	0
July ...	1	1	1	0	0
August ...	2	1	0	0	0
September ...	0	1	1	0	0
October ...	0	2	0	0	0
November ...	0	2	0	0	0
December ...	2	4	0	0	1
Totals ...	14	15	2	1	2

Females.					
	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	1	0	0	0	0
February ...	0	0	1	0	1
March ...	2	1	0	0	0
April ...	2	0	0	0	0
May ...	0	1	0	0	0
June ...	1	1	2	0	0
July ...	0	1	0	0	0
August ...	1	0	0	0	1
September ...	3	0	0	0	1
October ...	0	2	0	0	0
November ...	1	0	0	0	0
December ...	0	1	0	0	0
Totals ...	11	7	3	0	3

TOTAL NEW CASES.

	Males.			Females.
Syphilis	135	150
Gonorrhœa	226	63
Mixed Infections	13	24
Other V.D.	25	1
Not suffering from V.D.	56	72
Totals	455	310—765

ATTENDANCES.

	DUNDEE.		OTHER AREAS.	
	Males.	Females.	Males.	Females.
January ...	1,111	863	48	19
February ...	1,170	1,017	38	19
March ...	1,335	1,031	36	27
April ...	1,259	1,080	20	40
May ...	1,254	1,081	46	42
June ...	1,032	1,119	69	75
July ...	994	868	56	67
August ...	1,170	942	51	38
September ...	1,211	916	39	55
October ...	1,302	959	47	55
November ...	1,186	820	59	36
December ...	1,237	781	71	33
Totals ...	14,261	11,477—25,738	580	506—1,086
Dundee ...	...	...	...	25,738
Other Areas ...	...	...	...	1,086
Total ...	...	...	...	26,824

DUNDEE—Males.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	320	680	96	14	1
February ...	333	740	73	12	12
March ...	334	890	93	9	9
April ...	306	870	72	4	7
May ...	294	866	76	10	8
June ...	251	712	61	5	3
July ...	298	625	59	4	8
August ...	358	718	80	8	6
September ...	373	758	58	13	9
October ...	377	820	39	48	18
November ...	337	778	63	5	3
December ...	335	771	94	14	23
Totals ...	3,916	9,228	864	146	107

Females.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	493	232	127	0	11
February ...	556	279	166	0	16
March ...	496	304	221	0	10
April ...	540	267	265	0	8
May ...	478	281	306	2	14
June ...	496	343	252	0	28
July ...	331	273	245	0	19
August ...	370	276	278	0	18
September ...	331	248	310	0	27
October ...	371	297	274	0	17
November ...	338	262	205	0	15
December ...	337	257	171	0	16
Totals ...	5,137	3,319	2,820	2	199

OTHER AREAS.—Males.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	40	8	0	0	0
February ...	32	6	0	0	0
March ...	29	7	0	0	0
April ...	20	0	0	0	0
May ...	24	20	0	1	1
June ...	31	36	0	1	1
July ...	35	17	4	0	0
August ...	33	18	0	0	0
September ...	24	14	1	0	0
October ...	27	17	3	0	0
November ...	15	42	2	0	0
December ...	24	45	0	0	2
Totals ...	334	230	10	2	4

Females.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
January ...	15	3	1	0	0
February ...	8	3	6	0	2
March ...	19	6	2	0	0
April ...	30	7	3	0	0
May ...	25	15	2	0	0
June ...	18	26	31	0	0
July ...	14	48	5	0	0
August ...	17	17	3	0	1
September ...	32	15	5	0	3
October ...	26	28	1	0	0
November ...	17	19	0	0	0
December ...	17	16	0	0	0
Totals ...	238	203	59	0	6

TOTAL ATTENDANCES.

	Males.			Females.	
Syphilis	4,250	5,375	
Gonorrhœa	9,458	3,522	
Mixed Infections	874	2,879	
Other V.D.	148	2	
Not suffering from V.D.	111	205	
Totals	14,841	11,983—26,824	

AGE PERIODS.—Males.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
Under 1 year	7	0	0	0	17
1- 5 years	5	0	0	0	4
5-15 "	3	0	0	0	2
15-25 "	29	87	3	17	14
25 yrs. & up.	91	139	10	8	19
Totals ...	135	226	13	25	56
Grand Total	...	...	...	...	455

Females.

	Syphilis.	Gonorrhœa.	Mixed Infections.	Other V.D.	No. V.D.
Under 1 year	5	0	0	0	9
1- 5 years	11	1	0	0	14
5-15 "	19	4	0	0	7
15-25 "	32	26	10	1	15
25 yrs. & up.	83	32	14	0	27
Totals ...	150	63	24	1	72
Grand Total	...	...	...	...	310

DETAILS OF TREATMENT GIVEN.

	Neo. Kharsivan	Silver Salvarsan.
January ...	375	0
February ...	314	6
March ...	325	9
April ...	280	13
May ...	248	17
June ...	231	41
July ...	178	58
August ...	181	45
September ...	158	36
October ...	174	44
November ...	170	36
December ...	158	24

Totals ...	2,792	329
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	Stabilarsan.	Sulfarsenol.
January ...	10	0
February ...	20	2
March ...	20	0
April ...	39	1
May ...	6	10
June ...	12	22
July ...	14	7
August ...	17	3
September ...	24	1
October ...	19	5
November ...	19	5
December ...	20	2

Totals ...	220	58
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	Bismuth Cream.	Other Drugs.
January ...	64	164
February ...	117	79
March ...	149	83
April ...	136	47
May ...	128	34
June ...	91	51
July ...	111	71
August ...	120	57
September ...	110	50
October ...	104	54
November ...	91	48
December ...	86	34

Totals ...	1,307	772
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Totals —Neo. Kharsivan	2,792
Silver Salvarsan	329
Stabilarsan	220
Sulfarsenol	58
Bismuth Cream	1,307
Other Drugs	772

Grand Total	5,478
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Bacteriological Laboratory.

R E P O R T

OF

Professor William J. Tulloch.

REPORT OF WORK CARRIED OUT IN THE
DEPARTMENT OF BACTERIOLOGY, UNIVERSITY
COLLEGE, DUNDEE, ON BEHALF OF THE
DUNDEE PUBLIC HEALTH AUTHORITY.

From 1st JANUARY, 1924, to 31st DECEMBER, 1924.

The report is divided into the following sections and sub-sections so that continuity of arrangement may be maintained :—

I. CONTROL OF VENEREAL DISEASES.

(a) Control of Syphilis.

1. Dark Ground Examinations.
2. Wassermann Reactions.
3. Dreyer Flocculation Tests.
4. Examination of Cerebro-spinal fluids.

(b) Control of Gonorrhœa.

1. Microscopical examinations of discharges and urines.
2. Gonococcus Complement Fixation Tests.
3. Supply of vaccine.

(c) Note on total number of examinations carried out.

II. CONTROL OF OTHER COMMUNICABLE DISEASES.

(a) Diphtheria.

1. Throat swabs from cases and contacts
2. Virulence Test.

(b) Enteric Fever.

1. Widal Reactions.
2. Examination of fæces in convalescents

(c) Tuberculosis.

III. SPECIAL INVESTIGATIONS.

- (a) Examination of fæces for dysentery
- (b) Examination of milks for contamination.
- (c) Examination of milks for presence of Tubercle Bacilli.
- (d) Investigation of Outbreaks of food poisoning.
 - 1. Examination of suspected tinned meat
 - 2. Outbreak found to be due to cream cake.
 - 3. Outbreak alleged to be due to milk.
 - 4. Single case of apparently food idiosyncrasy.
- (e) Miscellaneous investigations. etc.

I. CONTROL OF VENEREAL DISEASES.

(a) Control of Syphilis.

- 1. Microscopical examinations of material to demonstrate the presence of *Treponema pallidum*.

During 1924 only 24 examinations were made for the presence of *T. Pallidum* in suspected syphilitic sores. The number is much too small, and it is especially worthy of note that all 24 examinations were made on patients attending the V.D. Clinic.

It would, therefore, appear that notwithstanding attention having been called to the importance of early diagnosis, too large, and possibly an increasing number of syphilitic cases remain untreated for a longer period than is necessary. It cannot be sufficiently emphasised that notwithstanding the precision of the Wassermann reaction as a diagnostic weapon it cannot give the same unequivocal evidence of syphilitic infection as does the demonstration of the causal organism in morbid exudates.

Moreover, if diagnosis and active treatment be postponed such treatment is prolonged, is more costly, and its end results less satisfactory than when treatment is commenced in the primary stage of the disease, so that, if only from the standpoint of reducing the cost of treatment, every effort should be made to ensure an early diagnosis being made.

2. Wassermann Reactions.

The number of Wassermann reactions performed during 1924 totalled 3,261, and of these 1,516 were from the clinic, 1,352 from institutions other than the clinic, and 393 from private practitioners. The number and the distribution of these is about the same as for the preceding year.

It is of interest to note that the technique employed here in conducting the Wassermann reaction—technique of Fildes and McIntosh—was one of these fully investigated at the League of Nations Conference on the standardisation of serological methods for the diagnosis of Syphilis, held at Copenhagen, 19th November to 3rd December, 1923, the representative of Poland, Professor Hirsfeld of Warsaw, employing this method. The results obtained were remarkable both for delicacy and specificity.

3. Dreyer Flocculation Tests.

During 1924 the Medical Officers of the Venereal Diseases Clinics began to supplement the Wassermann reaction with this test.

The test has the advantage that, although somewhat more laborious than, it is at the same time less complex than the Wassermann reaction, and moreover permits, within limits, of a quantitative assessment of the degree to which a syphilitic serum reacts positively, i.e., it has a quantitative significance and is therefore especially valuable in determining the effect of treatment upon any given case.

This test was extensively used here in a research undertaken during 1921-1922, and the results then obtained were eminently satisfactory.

The Officers in charge of the V.D. Clinics are now making continued use of this test.

A beginning was made during 1924, and 44 of these flocculation tests were performed during the latter part of that year, 41 specimens being sent from the clinic and 3 from private practitioners.

The value of this test was also enquired into at the League of Nations Conference in Copenhagen and,

although at first it appeared to be unreliable, further investigation showed that, if carried out with due precautions, its reliability was almost equal to that of the Wassermann test, while it could, within limits, be interpreted quantitatively.

4. Complete Examination of Cerebro-Spinal Fluids.

During 1924 a beginning was made by Dr. Averil to have more thorough investigation made of cases of suspected neuro-syphilis attending the clinic.

This has entailed very complete examination of cerebro-spinal fluids by all available methods, chemical and physical, including Lange's Colloidal Gold reaction

Such investigations are laborious but are well worth the time and labour expended upon them.

In different directions, then, advances are being made which tend to the more adequate control of treatment of syphilis by laboratory methods. This progress is made possible by the very harmonious relations which exist between the laboratory and the clinic.

(b) Control of Gonorrhœa.

1. Microscopical examination of Discharges for the Diagnosis of and Control of Treatment in Gonorrhœa.

This aspect of the work continues to increase and during 1924 a total of 1,094 specimens were examined, of which 116 were examinations of urine. Of these specimens 753 were from the clinic, 183 from institutions other than the clinic, and 158 from private practitioners, a slight increase on the same type of investigation for the previous year and over twice that for 1922.

2. Investigation of cases of Gonorrhœa by the Complement Fixation Reaction.

During 1924 495 Complement Fixation tests have been carried out with a view to control of treatment in, or diagnosis of gonorrhœa. These are distributed thus :—from the clinic 376, from institutions other than the clinic 25, and from private practitioners 94. The

total number of such tests is much the same as in 1923, but it is worthy of note that private practitioners are making more use of the reaction; in 1923 only 27 of these tests were made on behalf of private practitioners while during 1924 they numbered 94.

A sufficient number of tests of this kind have now been made to permit of the value of the method being definitely assessed, and it appears that the reaction is specific, of fair delicacy, and is of special value in assisting the clinical officers in the controlling of treatment, while it is also useful as an aid in diagnosing chronic gonorrhœa in the female.

3. Gonococcus Vaccine.

During 1924 the laboratory has continued to supply both male and female clinics with gonococcus vaccine upon a large scale.

The increase of investigations in respect of gonorrhœa is a striking feature of this year's work, and is, I think, a move in the right direction, for gonorrhœa is quite as important as syphilis in its influence upon the health both of society and of the individual.

- (c) Note on the total number of examinations of material from cases of suspected Venereal Diseases.

As statistics for four years are now available it seemed of interest to determine whether the investigation of material from cases of venereal diseases were increasing, decreasing, or remaining much the same from year to year.

In 1921 the total number of examinations was 4,954, in 1922 it was 4,183, in 1923 it was 4,973, and in 1924 it was 4,918. The figure, then, is fairly constant with the exception of 1922, and it would appear that it has attained and will probably maintain a yearly average of between 4,000 and 5,000.

II. EXAMINATION FOR THE CONTROL OF OTHER COMMUNICABLE DISEASES.

- (a) Diphtheria.

1. Cultural examination of throat swabs.

During 1924 there has been no notably serious or widespread outbreak of diphtheria in Dundee. Nevertheless, the number of swabs examined is considerably greater than in previous years.

The figures for such examinations since 1920 have been as follows:—1920, 429; 1921, 470; 1922, 569; 1923, 848; 1924, 1,188.

The increase is due in the main to more extensive swabbings of contacts and not to an increased number of cases, and is therefore indicative of appreciation of the value of preventative medicine.

The ratio of negative to positive findings in 1924 is therefore naturally somewhat higher than in previous years.

In connection with the examination of throat swabs, there is one point that calls for comment, viz.:—The result of the bacteriological examination of the throat is of great importance to the public health officer, and its value to the practitioner is no less great when he is dealing with doubtful cases, but when the clinical features suggest diphtheria, it is unwise to delay the administration of anti-toxin until the result of the bacteriological examination is available. A case which is clinically diphtheria should be treated as diphtheria. If complete investigation negatives the diagnosis, no harm is done, but harm **is** liable to be done to cases of diphtheria when the administration of serum is delayed. In cases which are clinically diphtheria it is well to have the diagnosis verified by bacteriological examination, but it is especially important that treatment be initiated forthwith.

2. Virulence Tests.

Fortunately, during the year 1924, no occasion arose in which it was necessary to proceed to the use of this test in order to expedite the discharge of any patient from King's Cross Hospital.

(b) Control of Enteric Fever.

1. Widal Reactions.

A small number of cases of Enteric Fever have occurred in Dundee during the year 1924, but fortunately there was no extensive outbreak of the disease.

In all 158 tests were carried out on 79 specimens of blood. The test is always carried out in duplicate against both Typhoid and Paratyphoid Beta Bacilli, as, unless this be done, infections with the latter organism are liable to remain undiagnosed. The value of this procedure was strikingly exemplified during this year, an extensive outbreak of paratyphoid (in another area served by this laboratory) of a mild form being discovered by means of the test.

During 1924 of the 79 specimens of blood examined only 18 gave positive or suspicious reactions, and it was remarkable that all 18 except 1 reacted with typhoid and only 1 with para-typhoid. In past years para-typhoid has been rather more frequent than typhoid, and in other areas served by this laboratory the incidence of para-typhoid has, during 1924, been much higher than that of typhoid.

2. Examination of Fæces and Urine in Convalescents.

In all, during 1924, 64 examinations have been made from convalescent cases, the typhoid bacillus being recovered from a number of these. None of the patients became carriers of the typhoid bacillus, and in no instance did that micro-organism persist in the fæces for a lengthy period after convalescence.

(c) Control of Tuberculosis.

334 specimens of sputum were examined from cases in Dundee during 1924—again a slight increase on the previous year. The ratio of negative to positive findings remains much as before.

Research on Tuberculosis still continues to occupy the staff of the laboratory, but this work must necessarily be slow and, although progress is being made, the value of new findings cannot be assessed for some time to come.

III. SPECIAL INVESTIGATIONS.

(a) Examination of Fæces for Dysentery.

Very few examinations of this nature have been carried out during 1924, and all have proved negative both for bacillary and amœbic dysentery.

(b) Examination of milks for contamination.

During 1924 seventy-two specimens of milk were examined to determine the degree of bacterial contamination and the presence of organisms of fæcal origin. The results of these examinations are as follows:—

1. Test for presence of *B. Coli*.

Bacillus coli test positive in .001 c.c. or less—Unsatisfactory ...	...	19
Bacillus coli test positive in .01 c.c. negative .001—Doubtful ...	...	16
Bacillus coli test positive in 0.1 c.c. negative .01 —Good ...	...	22
Bacillus coli test positive in 1 c.c. negative 0.1 —Very Good ...	...	7
Bacillus coli test negative in 1 c.c. —Excellent ...	...	8
Total ...		72

So far, then, as the *B. Coli* test is concerned 37 of these 72 milks are up to the standard of Grade A. milk, while 15 pass the more severe test for Grade A. pasteurised milk.

2. Total number of micro-organisms.

(a) Estimations spoiled on account of spreading growths	...	3
(b) Over 5,000,000 per c.c. ...	...	3
(c) Over 3,000,000 but less than 5,000,000 per c.c. ...	...	2
(d) Over 1,000,000 but less than 3,000,000 per c.c. ...	...	8
(e) Over 700,000 but less than 1,000,000 per c.c. ...	...	4
(f) Over 500,000 but less than 700,000 per c.c. ...	...	2
(g) Over 300,000 but less than 500,000 per c.c. ...	...	2
(h) Over 200,000 but less than 300,000 per c.c. ...	...	2
(i) Over 100,000 but less than 200,000 per c.c. ...	...	8
(j) Over 50,000 but less than 100,000 per c.c. ...	...	14
(k) Over 30,000 but less than 50,000 per c.c. ...	...	8
(l) Over 10,000 but less than 30,000 per c.c. ...	...	8
(m) Over 5,000 but less than 10,000 per c.c. ...	...	3
(n) Less than 5,000 per c.c. ...	...	5
Total ...		72

Therefore, from the standpoint of total content of all micro-organisms, 46 of the 72 milks are up to the standard of Grade A. milk, while 16 pass the more severe test for Grade A. pasteurised milk.

So far no dairy in Dundee has submitted any specimens of milk for grading under the Milk (Special Designations) Order of 1922 nor Amendment Order (Scotland) 1923.

(c) Examination of Milk for presence of Tubercle Bacilli.

During the year 24 specimens were submitted for special examination with a view to the demonstration of tubercle bacilli in milk. Only one of the 24 samples tested was found to be infected with B. Tuberculosis.

While the statistic is too small to permit of far reaching conclusions being drawn, the findings, along with those of the previous year, indicate that the quantity of tuberculous milk on sale in Dundee is small.

(d) Food Poisoning.

1. Tinned Meat.

One batch of tinned meat which came under suspicion during 1924 was made the subject of extensive investigation but nothing of public health significance was revealed by bacteriological examination of this material. Not only was the specimen examined free from taint with disease producing micro-organisms but it was also proved to be free from contamination with putrefactive bacteria.

2. Outbreak proved to be due to Cream.

A sharp outbreak of typical acute epidemic gastro-enteritis (food poisoning) occurred at the beginning of August, 1924. The cause of the outbreak was the "Aertrycke" bacillus and the vehicle of infection was whipped cream.

The relationship between suspected food-stuffs and the epidemic was clearly established by:—

- (I.) The recovery of the Aertrycke bacillus from the food.
- (II.) From the dejecta of several of those who had complained of illness.
- (III.) The demonstration of specific reactions between the blood of convalescents and the micro-organisms isolated from the food.

The investigation of the outbreak involved a very complete examination of all those who had handled the peccant food with a view to tracing the source of the outbreak, and a still more careful investigation of all who had been infected and whose occupation involved the handling of the same food-stuffs in order to ensure that further cases of the disease might not occur.

The measures proved quite satisfactory in that no secondary outbreaks occurred.

The remote source of infection of the kind under consideration is frequently difficult to trace as the Aërytrycke bacillus produces in an infection—sometimes of a very chronic character—among rodents, notably mice. Large numbers of mice would have to be examined before these small rodents could be excluded as the source of the infection.

A few mice from the premises involved were caught and examined but with negative results.

It also seemed possible, though very highly improbable, that the remote source of the infection was porcine. This, however, was definitely excluded.

It is to be noted that outbreaks of this kind due to accidental contamination of food-stuffs with "food poisoning" bacilli are bound to happen from time to time in different parts of the country, and it is worthy of note that in warm weather any uncooked food, especially food of animal origin, may constitute the vehicle of infection.

Outbreaks of food-poisoning in which the vehicle of infection is milk, cream, confectionery cream, or ice cream are liable to be widespread, but such widespread outbreaks, although the disease is an acute one, are not usually very severe.

3. Alleged outbreak of food-poisoning due to Milk.

A small outbreak of gastro-enteritis alleged to have been due to milk was fully investigated but neither the examination of the milk itself nor of the cows from which it was obtained revealed any evidence that the milk was tainted. Moreover, examination of the

dejecta from cases of illness in this small outbreak did not suggest that the condition was really one of food-poisoning.

4. A Case of Food Idiosyncrasy.

One case of what appeared to be food-poisoning due to the consumption of crab was fully investigated. The remains of the crab, the vomit and the fæces from the case did not reveal the presence of any disease-producing micro-organism. The case, therefore, appeared to be a somewhat severe one of what is well recognised, viz. :—food idiosyncrasy.

(e) Miscellaneous Investigations.

1. A case of Cerebro-spinal Fever.

One case of cerebro-spinal fever occurred in Dundee during 1924. The source of the infection could not be traced and there were no further cases.

2. Examination of fæces from cases of infantile diarrhœa at Dundee Infant Hospital.

Only 11 specimens of fæces were submitted from cases of infantile diarrhœa at Dundee Infant Hospital. None of these showed a heavy infection with either *B. Welchii* or *B. Proteus*.

2. Unclassified.

The remainder of the investigations consisted of the examination of the exudates for micro-organisms other than these of importance in the causation of epidemic disease, preparation of vaccines, investigation for the presence of *B. Tuberculosis* by special methods, etc.

The year's work has been exceptionally heavy, but the ready, helpful and interested co-operation of the staff of the public health department and the various clinics has done much to lighten and make pleasant the duties of the laboratory workers, especially during August, when the resources of the laboratory were somewhat severely tried.

King's Cross Hospital **REPORT**

BY

William M'Kie, M.B.Ch.B., D.P.H.
Senior Resident Medical Officer.

During the year commencing 1st January, 1924, and ending 31st December, 1924, 1,324 cases of ordinary infectious disease, and 129 cases of tuberculosis were admitted to the Hospital.

The daily average number in cases of ordinary infectious diseases was 117.77, while in the case of tuberculosis it was 51.02.

The highest daily number of all patients in Hospital was 226 (on 31st October), while the lowest was 132 (on 30th May).

Below is a table of all patients treated in Hospital during the past year:—

DISEASE.	In Hospital at 31st Dec., 1923.	Admitted between 1st Jan.—31st Dec., 1924.	Discharged be- tween 1st Jan.— 31st Dec., 1924.	Died between 1st Jan. and 31st Dec., 1924.	Remaining in Hospital at 31st Dec., 1924.
Scarlet fever	84	720	703	34	67
Diphtheria	28	398	339	50	37
Measles	0	118	71	21	26
Enteric fever	3	17	19	1	0
Erysipelas	*2	21	21	2	0
Diphtheria and scarlet fever	2	26	23	4	1
Ophthalmia neonatorum	0	8	7	0	1
Rubella	0	5	5	0	0
Diphtheria and Measles	0	4	2	2	0
Mumps	0	1	1	0	0
Pneumonia	0	1	0	1	0
For observation (Pedi- culosis)	0	1	1	0	0
Scarlet fever and chickenpox	0	2	2	0	0
Diphtheria and Whoop- ing cough	0	1	1	0	0
Whooping cough and broncho-pneumonia	0	1	0	1	0
Tuberculosis	46	129	65	58	52
	<hr/> 165	<hr/> 1,453	<hr/> 1,260	<hr/> 174	<hr/> 184

*Appeared last year as 1.

The case mortality for the ordinary infectious diseases was 8.76 per cent., while for tuberculosis it was 44.9 per cent.

SCARLET FEVER.

There were 720 cases of scarlet fever admitted to the wards during the year; 34 cases proved fatal, giving a case mortality of 4.72 per cent.

The sex and ages were as follows :—

Age.	Cases.		Deaths.	
	M.	F.	M.	F.
Under 1 year ...	7	6	2	1
1- 2 years ...	11	12	2	3
2- 5 „ ...	112	117	9	10
5-15 „ ...	143	218	5	2
15-25 „ ...	18	47	0	0
25-45 „ ...	10	17	0	0
45 and over ...	1	1	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
Total ...	302	418	18	16
		720		34

The details of various cases were as follows :—

1 case aet. $10\frac{1}{2}$ years came in suffering from lobar pneumonia and died in 5 days. The diagnosis of scarlet fever was not confirmed.

A child of three months had broncho-pneumonia on admission and died in 2 days. The diagnosis of scarlet fever was not confirmed.

Another case aet. 4 years was suffering from febrile and catarrhal signs on admission, and developed measles and laryngitis in 2 days in such a severe form that tracheotomy was ultimately necessary. The child died after being in Hospital 20 days. The diagnosis of scarlet fever was not confirmed.

Another case aet. 6 years, was admitted suffering from severe cellulitis of the leg and died in 6 hours. The diagnosis of scarlet fever was not confirmed.

In other 33 cases the diagnosis of scarlet fever was not confirmed. In 6 measles was ultimately diagnosed, while in 1 marasmus seemed to be the main element in the illness. In 17 cases no definite disease was detected, while in 3 cases rubella proved to be the illness. In yet another a severe burn was probably the cause of the symptoms, while in another broncho-pneumonia and enteritis were found to be present.

In 10 cases another disease was found to be present as well as scarlet fever. In each of these cases diphtheria was the complicating condition.

The complications were many and quite a number were of a severe type, in a considerable number requiring operative interference. The chief among these were :—

Arthritis	...	...	...	30
Cervical adenitis	...	...	...	99
Otitis media	...	...	...	54
Mastoid abscess	...	...	...	8
Rhinitis	...	...	...	79
Nephritis	...	...	...	14
Albuminuria	...	...	...	14

23 cases developed chickenpox when in the wards. 16 developed diphtheria, while 1 became a diphtheria carrier, 2 developed rubella, 1 whooping cough, and 6 developed measles.

In 37 cases the provisional diagnosis was not confirmed.

Details are given below of the diagnosis finally arrived at :—

Measles	...	...	...	8
Rubella	...	...	...	3
Marasmus	...	...	...	1
Lobar pneumonia	...	...	...	1
Broncho - pneumonia	and	...	...	1
enteritis	...	...	...	1

Tonsillitis and various adventitious rashes accounted for the remainder of the cases.

The widespread and prolonged epidemic of scarlet fever has been characterised by many serious complications, and as most severe and complicated cases came to Hospital the death roll of admitted cases, as also the number of severe complications among them has been exceptionally high.

DIPHTHERIA.

During the year 398 cases were admitted to Hospital with a diagnosis of diphtheria. 57 cases were found not to be suffering from true diphtheria. 9 were carriers only, while the remainder on investigation were proved to be suffering from some other malady. 21

turned out to be tonsillitis, 7 had broncho-pneumonia, while 4 had peritonsillar abscesses, 2 had tonsillectomy wounds only. The remainder were suffering from various debilitating diseases with some faucial or laryngeal complication.

The age and sex of all the cases admitted are as follows :

Age.		Cases.		Deaths.	
		M.	F.	M.	F.
Under 1 year	...	8	4	0	0
1- 2 years	...	21	12	9	6
2- 5	...	75	60	13	5
5-15	...	76	90	11	5
15-25	...	6	27	0	1
25-45	...	0	17	0	0
Over 45	...	0	2	0	0
		<hr/>	<hr/>	<hr/>	<hr/>
		186	212	33	17
Total		398		50	

The case mortality for diphtheria was 12.56 per cent.

The following shows the main complications noted :—

Two cases were of a hæmorrhagic nature—both died.

Severe epistaxis occurred in	...	...	...	3 cases.
Cervical adenitis	...	...	...	13 "
Palatal paresis	...	...	...	16 "
Pharyngeal paresis	...	...	...	5 "
Paresis of muscles of back and limbs	...	...	...	1 case.
Facial paresis	...	...	...	1 "
Strabismus	...	...	...	4 cases.
Otorrhœa	...	...	...	12 "
Albuminuria	...	...	...	8 "
Septic sequelæ	...	...	...	6 "

In one case a mastoid abscess required mastoidectomy. Another case developed a severe secondary diphtheria in the fifth week of convalescence. Both these cases made excellent recoveries.

45 cases were of the laryngeal type, of these 21 of purely laryngeal type showed 3 deaths to 18 recoveries, while 9, which were of mixed faucial and laryngeal type all recovered. In 15 cases tracheotomy had to be performed, 8 of these recovered while 7 died.

16 convalescents from diphtheria developed scarlet fever, while 5 developed measles, 1 chickenpox and 1 erysipelas.

A considerable number of cases reach the Hospital at a stage when treatment offers little hope of cure. Parents or those responsible in nearly all these instances have failed to recognise the seriousness of the condition and have not called in a doctor early enough.

MEASLES.

During the past year 118 cases of measles were admitted to the Hospital. A great many of the cases were complicated with broncho-pneumonia. 71 cases were discharged cured or much improved, while 21 cases proved fatal.

The sex and age of the cases are given below :—

Age.	Cases.		Deaths.	
	M.	F.	M.	F.
Under 1 year ...	11	8	2	1
1- 2 years ...	20	14	5	3
2- 5 „ ...	30	21	5	5
5-15 „ ...	1	8	0	0
15-25 „ ...	0	4	0	0
25-45 „ ...	0	1	0	0
Over 45 „ ...	0	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
	62	56	12	9
Total ...	118		21	

The case mortality for measles was 17.79 per cent.

2 cases admitted with a diagnosis of measles proved on further investigation to be suffering from adventitious rashes, while other 2 turned out to be rubella. In another 2 cases whooping cough was found to be present as well as measles.

The chief complications noted are set out below :—

Broncho-pneumonia was present in ...	27 cases.
Otorrhœa was present in ...	6 „
Severe burns were present in ...	3 „
Septic conditions were present in ...	3 „
Tubercular conditions were present in ...	2 „
Corneal ulcer and gastric tetany were present in ...	1 case.
Bronchitis was present in ...	1 „

ENTERIC FEVER.

17 cases were admitted with a diagnosis of enteric fever. Of these cases 14 were proved by bacteriological examination to be true cases of enteric. 13 were found to have been infected with bacillus typhosus: while one had been infected with bacillus para typhosus B.

All these cases were discharged cured except one—a female of 4 (the para-typhosus B. case) who died of hypostatic pneumonia.

Three cases admitted during the previous year were also discharged cured. In one of these cases bacteriological evidence of enteric was not conclusive though other pathogenic members of the colon typhoid group were recovered from the stools. This was however clinically a case of enteric fever.

Two cases were never confirmed bacteriologically or clinically and returned home, while another in a similar position was transferred to Dundee Royal Infirmary for further investigation.

One case developed chickenpox while in the ward, having been infected before admission.

An age and sex table of cases is appended:—

Age.	Cases.		Deaths.	
	M.	F.	M.	F.
1- 5 years ...	1	4	0	1
5-15 „ ...	3	3	0	0
15-25 „ ...	1	3	0	0
25-45 „ ...	1	0	0	0
45 years and over	1	0	0	0
	<hr/>	<hr/>	<hr/>	<hr/>
	7	10	0	1
Total ...	17		1	

ERYSIPELAS.

21 cases of erysipelas were admitted during the year. There were two deaths, giving a case mortality of 9.5 per cent.

DIPHTHERIA AND SCARLET FEVER.

During the year 26 cases were admitted with a diagnosis of diphtheria and scarlet fever. Of these 16

were ultimately confirmed as suffering from both diseases. Of the total 4 died, 21 were discharged, and 1 remained in Hospital.

TUBERCULOSIS.

129 cases of tuberculosis were admitted to Hospital during the year. 58 proved fatal, giving a case mortality of 44.9 per cent. 26 males and 39 females were discharged during the year, while of the 129 admissions 64 were males and 65 females.

The age and sex of the fatal cases were as follows—

Age.		Male.	Female.
Under 1 year	...	0	0
1- 5	„ ...	1	1
5-15	„ ...	1	1
15-25	„ ...	11	10
25-45	„ ...	16	12
45-65	„ ...	3	1
Over 65	„ ...	0	1
		—	—
Total	...	32	26

BACTERIOLOGICAL LABORATORY.

During the year investigations carried out in the Laboratory of the Hospital were as follows:—

Cultural investigations of throat swabs—

In-patients	...	...	...	...	3,830
Contacts	...	...	...	...	505
				—	
			Total	...	4,335

Specimens of sputum examined (microscopically) 301

WILLIAM McKIE, M.B., Ch.B., D.P.H.

NATIONAL
INSTITUTE
FOR
RESEARCH
IN
DAIRYING

REPORT

OF

Mr Ferrier, Veterinary Inspector.

Dairies.

During the year I examined 4,540 cows, which necessitated 242 visits to dairies, and on the whole found the health of the cows to be very satisfactory.

Cattle Market.

The Cattle Market is visited by me every market day (Tuesday), and all the cattle, sheep and pigs exposed for sale are inspected for the purpose of preventing animals showing symptoms of disease, and which are ultimately intended for human food, being sold. The Superintendent of the Market and I seize all suspicious animals exposed for sale in the fat stock market, under powers conferred by Section 43 of the Public Health (Scotland) Act, 1897, which renders the owners of animals so seized liable to prosecution. The owners of such animals are given the option of sending them to the slaughter-house to be killed. There, the carcasses undergo a minute inspection, and are dealt with on their merits. In the event of the owner of such failing to comply with our request, the animal can be seized and the owner prosecuted under the Act above mentioned.

Meat Inspection at Slaughter-Houses and Meat Market

The new Public Health (Meat) Regulations (Scotland), 1924, which came into force on 1st August entail visiting the Slaughter Houses daily, these visits on an average occupy the whole forenoon. Since the above Regulations commenced two Detention Officers have been engaged, who are always at hand whilst animals are being killed and dressed. Every organ is thus examined during the process and all carcasses suspected of being diseased are detained pending my examination. This more minute method of routine inspection has resulted in a greatly increased number of tubercular animals being detected, in fact the figures for the previous years have almost doubled.

The following table shows the number of animals slaughtered at the Public Slaughter-Houses, and found to be unsound, and the weight of each class seized and condemned as being unfit for human food.

Diseased or Unsound Carcases.				Weight (in lbs.)		Condemned.
Cattle	...	...	934	Beef	...	128,543
Calves	...	...	4	Veal	...	103
Sheep	...	...	42	Mutton	...	985
Pigs	...	...	182	Pork	...	3,708

The following table shows the number of carcases, dressed or undressed, brought in during the year and found to be diseased or unsound, and the weight of each class seized and condemned as being unfit for human food:—

Diseased or Unsound Carcases.				Weight (in lbs.)		Condemned.
Cattle	...	...	448	Beef	...	81,228
Calves	...	...	14	Veal	...	611
Sheep	...	...	443	Mutton	...	12,234
Pigs	...	...	60	Pork	...	6,167

giving a total seizure of 233,578 lbs.

The following is a synopsis of the organs seized and condemned in addition to the foregoing at the Slaughter-houses for the full year:—

CATTLE ORGANS.			SHEEP ORGANS.			PIGS' ORGANS.		
Cows' Udders	...	106	Livers	...	12	Udders	...	12
Livers	...	601	Plucks	...	81	Plucks	...	62
Lungs	...	481	Kidneys	...	52	Kidneys	...	2
Hearts	...	127	Lungs	...	29	Livers	...	31
Kidney	...	82						
Heads	...	197						
Tongues	...	101						
Skirts	...	103						

In addition the following was seized there for decomposition:—

Tinned Meat ... 282 lbs. Frozen Meat ... 775 lbs.

Anthrax.

During the year there was one case of anthrax which was detected and diagnosed at the Slaughter-house after examining the blood of the animal microscopically. A swab and smear of the blood was forwarded to the Ministry of Agriculture and Fisheries, where the diagnosis was confirmed. The carcase was burned.

A Report was sent to the Ministry of Agriculture and Fisheries on this case.

Swine Fever.

During the year 5 visits were made to pigs reported to have died suddenly, but no actual case of swine fever occurred in the city.

Parasitic Mange.

There were no cases of this disease during the year.

Foot and Mouth Disease.

During the year there was no case of Foot and Mouth disease in the city, but owing to the prevalence of it in some districts, Regulations had to be made controlling the movement of cattle, sheep, goats and swine, which when moved, had to be accompanied by a Movement License which had to be delivered to the Police when the movement was completed.

217 Movement Licenses were issued during the months of January and February.

Importation of Animals Act, 1922.

Since the above Act came into operation, Canadian and Irish cattle are permitted to be landed in this country for immediate slaughter or for movement to farms, accompanied by License issued by the Inspectors of the Ministry, where they require to undergo 6 days detention and are subject to constant supervision. 1,060 Irish cattle were admitted into the city accompanied by License, the inspection of which necessitated 140 visits.

Animals Transit and General Amendment

Order of 1924.

Under this Order all trucks or railway vehicles used for the conveyance of live stock must be washed, scrubbed and thoroughly cleansed, thereafter being disinfected before they can be again used for such a purpose. This procedure now takes the place of the lime-washing of former years and is much more effective. This Order has been observed by the railway officials and periodical visits have been made by me to the various railway stations.

Veterinary Attendance on Horses belonging to the Corporation.

Nine horses were examined for soundness before being purchased by the Horse and Provender Committee for the Cleansing Department. The attendance during the illness of the horses belonging to the different Departments necessitated 104 visits during the year. The whole stud is in a satisfactory state of health, not, however, up to the usual good condition of former years owing to being harder wrought and the quality of the hay and oats of last year, not being up to the usual standard, did not contain the same feeding value.

REPORT

OF

Mr Mitchell, Chief Sanitary Inspector.

SANITARY DEPARTMENT,
WEST BELL STREET,
DUNDEE, 18th MAY, 1925.

*To the Scottish Board of Health ; and
the Lord Provost, Magistrates, and Councillors—
the Local Authority of the City of Dundee.*

GENTLEMEN,

I have the honour to submit my Annual Report showing the work of the Sanitary Department during the year 1924. The Report has been prepared in accordance with the requirements of the Board as contained in their circular dated 30th December, 1924.

Death-Rate: Density of Population and Acreage.

The death-rate per 1,000 as calculated and corrected by the Medical Officer of Health for 1924, was 16.4 as against 14.7 in 1923 and 16.7 in 1922.

The population, as estimated to the middle of 1924 by the Registrar-General, is 171,295.

The acreage of the city, excluding foreshores, is 6,548. This works out at 26.16 persons to an acre.

Staff.

The number and composition of the Staff is as follows :—

- 1 Chief Sanitary Inspector.
- 1 Superintendent.
- 1 Plumber Inspector.
- 1 Housing Inspector.
- 2 Food Inspectors and Sampling Officers.
- 4 District Inspectors.
- 1 Port Sanitary Officer.
- 7 District Officers.
- 2 Junior District Officers.
- 1 Clerk.

Total 21

Rainfall.

The total rainfall in Dundee, as noted by the Superintendent of Cemeteries at the Eastern Necropolis, was 35.66 inches, as against 31.08 inches last year. The figures for each month are as follows :—

January	...	...	...	2.50 inches.
February	...	...	...	1.09 inches.
March	...	...	...	.78 inches.
April	...	...	...	1.83 inches.
May	...	...	...	4.40 inches.
June	...	...	...	2.17 inches.
July	...	...	...	4.74 inches.
August	...	...	...	2.88 inches.
September	...	...	...	4.53 inches.
October	...	...	...	4.72 inches.
November	...	...	...	2.00 inches.
December	...	...	...	4.02 inches.

Total ... 35.66 inches.

This shows an average fall of 2.97 inches per month, as against 2.59 inches of the former year, and 2.10 inches in 1922.

Public Sewerage of the City.

The sewerage of the city is discharged direct into the River Tay by fireclay and iron pipes, brick-built egg-shaped sewers, and stone-built rectangular sewers, the total length of which is 130½ miles.

The work of superintending these and keeping them in good repair is under the charge of the City Engineer and his staff. On their maintenance and repair the sum of £2,319 was expended, whilst new sewers and gullies were provided at a cost of £3,842 1s 11d.

The sewers have been kept in a proper and satisfactory state throughout the year, and no complaints regarding offensive odours emanating from them have reached the Department.

Water Supply.

Mr George Baxter, jun., the Water Works Manager and Engineer, reports :—

“Practically the whole of the City’s Water Supply

is drawn from Lintrathen Loch, unless when one or other of the Lintrathen Trunk Mains are under repair, in which case the Monikie Reservoirs are drawn on to augment the reduced quantity from Lintrathen. As the Lintrathen Mains, however, become more reduced in carrying capacity owing to the incrustation of their interiors, the Monikie source of supply will gradually require to be made fuller use of. The Reservoir at Crombie is normally used exclusively for the supply of Carnoustie and Barry, but can also in emergency be utilised for the supply of Monifieth and Broughty Ferry.

The Crombie and Monikie waters are filtered through gravity type slow sand filters before delivery to consumers. The Lintrathen water is not filtered however. It is impounded in a reservoir which has at the present rate of consumption approximately 200 days storage, and from an upland Catchment Area of 19,000 acres—86 per cent. of which is virgin moorland—where the risk of pathogenic pollution has been reduced to negligible minimum. The Department now owns the 4,000 acres of the Catchment Area lying contiguous to the Reservoir and containing the main feeder for a distance back of approximately $3\frac{1}{2}$ miles. 1,000 acres of this area have been afforested and the remainder laid down in permanent pasture.

All bacteriological authorities are agreed that prolonged storage greatly improves the quality (bacteriologically) of surface gathered water, and where in the case of Lintrathen the raw water is initially of a relatively high degree of organic purity, the prolonged storage which it undergoes finally reduces the bacterial content to far below that which is generally accepted as admissible, rendering it fit for domestic use without filtration treatment.

The average quantities of water drawn daily from the various Reservoirs during the past year were as follows:—

Lintrathen	...	...	...	9,096,000	gallons.
Monikie	...	...	...	272,000	"
Crombie	...	...	...	332,000	"
				<hr/>	
Total	...	...	...	9,700,000	"

This total is lower by 225,000 gallons than the corresponding figure last year, a fact accounted for chiefly by the mastery that is gradually being obtained over waste.

The population of the Water Area is approximately 210,000, so that the above total represents a daily consumpt per head of 46.2 gallons. Of this rate per head 16.2 gallons represents the Meter supply for Trade and general Public Health Purposes, including Street and Sewer Flushing, leaving a balance of approximately 30 gallons per head for general Domestic purposes. Although 30 gallons per head is the average consumpt in the city and district, the consumpt per head varies between exceedingly wide limits and is, unfortunately, least in those districts of the City where housing and congestion are worst where it dwindles down to less than 10 gallons per head per day. Compared with other Cities in the British Isles, 30 gallons per head per day is a relatively high figure, although in comparison with Continental and American Cities, and particularly the latter, it is low. The consumpt per head in any city is really predetermined by local circumstances and depends largely on the habits of the people. With the rehousing of that section of the population which at present is inhabiting housing where facilities for using water are of the most primitive description, there is no question that there will be a considerable increase in the quantity of water daily consumed in the City and district."

One sample of water as supplied by the Dundee Water Commissioners was taken from the tap at the Public Health Offices and the following is the Analyst's report thereon :—

" This water has a decidedly yellow colour (Red 2.2. Yellow 4.6, Lovibond's standard scale) and contains more than an average amount of suspended matter. The yield of Free Ammonia is low, that for Albuminoid being moderate in proportion. Saline material is low, leaving the water soft and suitable for washing purposes. Nitrates are absent, indicating freedom from ' previous Sewage Contamination.' On incubation of the water at blood heat there was a slight musty odour. A Sedgwick Rafter Plankton revealed a number of ordinary diatoms including Tabellaria and Aster-

ionella, Chlorophyceae, and a quantity of vegetable debris. In my opinion the analysis is satisfactory and the water is fit for drinking and general domestic purposes. The amount of suspended solids, which is probably due to the recent excessive rains is not excessive and should not cause any inconvenience.

Free ammonia	...	...	...	...	.004
Albuminoid ammonia	...	...	...	...	.130
Carbonate of lime, &c.	...	...	...	...	24.400
Chlorine	...	...	...	...	10.000
Nitrogen as nitrates	...	...	...	...	—
Nitrites	...	...	...	...	—
Hardness in Clark's degrees	...	...	...	...	13
Lead or other poisonous metals	...	...	...	...	—

DOMESTIC WATER SUPPLY—SINKS, &c.

Under our Local Act of 1907 27 notices, after authorisation by the Town Council were served upon the owners or agents of property to have the water supplies in dwelling houses augmented through the introduction of new service piping of a larger diameter. These notices have been complied with or are now in course of receiving attention. At 15 properties from the tenants of which complaints were received regarding insufficient supply of water for domestic purposes the water supply was augmented through the introduction of larger main service pipes. These complaints generally are due to the diameter of the main service pipe being too small, usually $\frac{1}{2}$ inch. When a $\frac{3}{4}$ or 1 inch diameter pipe is substituted therefor adequate supply is assured. 108 sinks complete with water taps, waste pipes and drainage have been introduced into the dwelling houses at 44 different properties the occupiers of which had previously to obtain their water supply for domestic purposes from outside sources and had to remove the waste water from the house by means of pails and other receptacles. In many instances this was simply emptied on to waste undrained ground where it formed the source of a continued nuisance, or emptied into ashbins, causing rust and corrosion, and shortening the life of the bin.

Scavenging and General Nuisances.

The work of scavenging the City does not come under the jurisdiction of this Department—a special Superintendent being responsible to the Town Council

for the efficient Cleansing, filth and manure, etc., removal. The work is carried through on methodical lines and no complaints (other than what I hereafter mention) have reached me or called for my action.

GENERAL NUISANCES—Work under this head, so far as a Sanitary Department is concerned, may be looked upon, with now and then a variation, as day by day routine work—a repetition from the beginning to the end of the year.

Everything which comes under the definition of a “Nuisance” as exhaustively detailed in the Public Health (Scotland) Act. has to receive attention and steps taken for prompt removal. No source of injury to the health of the Citizens must remain an evil in our midst—the Law should be speedily put into operation.

In my report of last year I mentioned the delay which was occasioned by the round about methods which had to be given effect to ere a nuisance, of either petty or alarming dimensions, could be legally and effectively removed. In that report I recommended the Town Council of Dundee should appoint its Public Health Committee to be the Local Authority under the Public Health Act, with power to carry out its provisions. At that time whatever action the Public Health Committee took had from the time of its meeting until approved of by the Town Council at its monthly meeting to lie in abeyance. Thus much time, during which the nuisance remains giving off its pollution, is wasted ere removal is effected.

It is gratifying to know that the Town Council have now given effect to that recommendation and hereafter whatever action the Public Health Committee may take under the Public Health Act immediately becomes Law in so far as the carrying out of the provisions of the Act is concerned. Thus we are now in a position to effect speedy nuisance removal of any description.

MANURE WAGGONS AT DOWNFIELD STATION.—Contrary to all my expectations there was a repetition of the complaints from residents in Downfield regarding offensive smells from manure in waggons whilst lying at the station there. The foundation of the complaint

is the waggons loaded with the Town's manure may lie at the siding for just a little while ere the farmers are able to take delivery.

This class of nuisance was also referred to in my report of last year when I understood this manure traffic was to be discontinued.

The matter eventually came before the Cleansing Committee when the Superintendent was instructed "that in future no manure must be sent to that station." I trust, therefore, we have now heard the last of a nuisance which was to say the least very apparent and offensive.

Another complaint, which was referred to as a "POISON GAS BARRAGE," emanated from the Old Craigie Road. From this district serious complaints reached the Department regarding obnoxious gases and smells emanating from a refuse coup or dump in the vacant piece of ground behind the old quarry and entered of Old Craigie Road. I found the gases or smells proceeded from oily waste, old leather, mill refuse, and old refuse paint from shops, combined with cinders from furnaces, etc., being deposited there. These materials had been set on fire, or spontaneous combustion started, and the fumes and smells were pervading the houses in the neighbourhood.

I called upon the Solicitors representing the owner of the ground and also the contractor who was depositing this refuse, etc., to abate the nuisance.

This was done, and since then no further cause for complaint has been found.

A property in Campbell Street was dealt with for insufficient water closet accommodation. Here there were housed 71 persons, viz.—33 males and 38 females, with only two water closets for their use.

The matter was brought before the factors on whom, in the first instance, an intimation was served requesting the provision of additional five water closets. They refused to give effect to the terms of that intimation and the subject was brought before the Public

Health Committee and Town Council, who ordered a notice to be served in the usual way. This also was not complied with, and the particulars had to be laid before the Magistrates in the Police Court to enforce the work being carried out. The Magistrate eventually decided that two additional water closets must be provided here within six months from December, 1924, and the others within one year.

In the work of nuisance discovery and suppression much of the time of the inspecting staff is taken up. During the year 74,154 inspections under this head were made in the course of which 12,658 nuisances were discovered and steps taken for their removal.

Whitewashing and Painting of Common Stairs and Passages.

In the beginning of June a survey was made of the whole City to ascertain the common stair cases and passages that required to be whitewashed or oil painted. Thereafter an intimation was sent to house owners or agents pointing out the properties where this work was necessary to be executed so that the order could be placed with tradesmen, and the occupiers of house property enjoy during the summer months the benefit of clean surroundings. This, at the same time, would give tradesmen and painters the opportunity of coping with the work without congestion, so that shortage of labour could not be pleaded as a cause of undue delay. On these instructions work of this nature was gradually proceeded with, but later it was found necessary to serve 238 notices directing attention to clause 354 of "The General Police and Improvement Consolidation Act of 1862," which is incorporated with and forms part of the Dundee Police and Improvement Consolidation Act of 1882. This acted as a stimulus, and the work was gradually overtaken by the fall of the year.

WHITE-WASH BRUSHES.—As in former years the giving out of brushes on loan to clean the dwelling-houses of the section of the community who were unable to purchase those, was taken full advantage of. In fact, more so than in former years owing to the increased price of brushes—4,185 being thus given out. Where recommended by the District Inspector,

whiting and ochre was also given out free to persons who were unable to purchase such material.

Stables and Piggeries.

There are 435 of the former, and to enforce lime-washing 896 visits were made. To the latter, 156 in number, there were 750 visits.

Taking the piggeries generally they have been kept in as satisfactory a state as could be expected. Unfortunately, the Bye-Laws for pig stys drafted by me over two years ago for submission to the Town Council have not been put through the necessary legal procedure so that they may become Law and put into force. The periodical removal of manure from both stables and piggeries has been insisted upon and our instructions usually promptly complied with.

Complaints.

2,522 complaints regarding nuisances, &c., were made at the Office—all of which have received attention. On careful enquiry, however, 156 of these complaints were found to be absolutely groundless, whilst quite a number of them were frivolous and showing little cause for action by the Department.

Statutory Intimations or Notices.

Under our Local Acts, the Public Health (Scotland) Act or other Acts which fall to be given effect to by the Department, there were 13,505 intimations or notices (written or verbal) served or given, and under Section 20 of the Public Health (Scotland) Act 9 statutory notices, as authorised by the Public Health Committee, to owners or factors of properties or other other authors of nuisances—all of which have received or are now in course of receiving attention.

Letters and Special Reports.

1,832 letters and special reports regarding insanitary properties, nuisances, &c., and general correspondence have been sent out from and received at the office.

Infectious Diseases and Disinfection.

In pursuance of enquiries relating to infectious

diseases 6,526 visits were made by the inspectors, whilst 1,439 patients were removed to King's Cross Hospital. It was not necessary for any person to be removed to the Reception House in Fleuchar Street.

Where infectious disease existed, the householder's attention was drawn to the requirements of Sections 50 and 53 of the Public Health (Scotland) Act, 1897, for the prevention of the spread of disease—2,391 such notices were served. Intimations to the Education Authorities, school teachers, &c., numbered 3,250. The houses or premises where infectious disease had occurred numbering 1,834 were disinfected, and 26,763 sets of bed and body clothing were also so treated, or where the special sanction of the householder was received—destroyed. In addition to the above premises there were, in dwelling-houses, 21 rooms for cancer and 38 for vermin, and 22 rooms in the Infant Hospital, Day Nurseries, or Public or Semi-Public Buildings disinfected.

The Municipal Dispensary was disinfected on one occasion each month.

Under this head fuller details, particulars and statistics are given in the Report of the Medical Officer of Health.

JUTE FOR EXPORT.

Raw jute and jute cloth for export to the Argentine, &c.—which, to meet the requirements of the Law of the South American States, must be disinfected and certified to be free from infection before being allowed entry—totalled 1,357 bales.

Plans submitted to the Works Committee.

Arrangements have now been made whereby all plans lodged with the City Engineer for submission to the Works Committee shall be examined by me.

On one occasion it was deemed expedient to object.

The plans were carefully gone over and the property subsequently visited by the Medical Officer of Health, the City Engineer and myself.

After consultation with the Architects and the Owners or Agents the plans in question were withdrawn.

Drainage and Structural Improvements.

Improvements have been carried out on the drainage system and sanitary arrangements of 152 properties. In connection with which the following material was required :—

- 206 Water-closets.
- 108 Sinks.
- 42 Wash-tubs.
- 68 Lavatory Basins.
- 24 Baths.
- 1,959 feet of Cast-iron Drain Pipes.
- 58 Cast-iron Traps.
- 52 yards of Fire-clay Drain Pipe.
- 12 Fire-clay Traps.

Water Closets.

206 new, renewed or additional w.c.'s have been introduced during the year.

56 of these represent modern appliances provided in dwelling houses to replace old dilapidated fittings.

19 new w.c.'s introduced into dwelling-houses as additional accommodation or in place of privies.

61 represent w.c.'s renewed in outside positions such as staircases, passages, courts, &c.

39 new closets provided in such positions.

11 represent w.c.'s provided in factories, workshops and workplaces.

16 were introduced into sale shops, offices, &c.

4 into lodging-houses.

There are still quite a number of pan and other antiquated insanitary w.c. appliances throughout the

City, but these are being gradually eliminated as proprietors find it cheaper in the end to provide modern fittings rather than continually patch the old ones.

We have yet properties where the existing w.c. accommodation used in common is insufficient in number for the tenants.

The ideal is, of course, a w.c. for every house, but as that is unattainable under existing circumstances the aim is to have at least one such convenience for use in common by two, and not more than the occupants of three separate dwelling-houses. Presently in some cases double the latter number use the one convenience. This state of matters is, however, being steadily rectified.

Structural work and improvements of the above description were carried out at the sight of the Department's Plumber and Mason Inspectors, who made 2,620 visits whilst the work was in course.

Back Courts, Areas, &c.

Through Section 21 of the Burgh Police (Scotland) Act, 1903 (adopted by the Town Council of Dundee), 6,843 square feet of pavement flags, concrete, or other impervious material were laid down with a fall of 1 in 48 to a gully trap to carry off the storm water in the keeping of courts, areas, passages, &c., in a proper state. Those courts, &c., are often the gathering ground for refuse and filth and a smooth impervious surface is an absolute necessity, more especially in the centre of the City. This allows the Cleansing Department proper facilities in flushing and sweeping. Where it is deemed necessary we have power to call upon the owners or agents of properties to erect and maintain efficient flushing appliances with a full supply of water for the regular cleansing.

Privies, Earth Closets, or Privy Middens.

In my reports of 1920 and 1922 I gave detailed lists showing the number of privies, earth closets and privy middens which were still in use as such. I have revised the list and give it in detail here as at the end of December, 1924.

District One.

Ward.	SITUATION.	NUMBER OF		TO SERVE.		
		Privies or Earth Closets.	Privy Middens.	No. of Households.	Persons.	
					M.	F.
5	Easter Clepington - - - -	2	...	2	5	3
5	Dighty Toll (East) - - - -	2	...	2	5	5
5	Dighty Toll House - - - -	1	...	1	3	5
5	Old Manse Mains - - - -	1	...	1	4	6
5	Castle Mains (Rangers Houses) - -	...	2	2	4	3
5	Castle Mains (North House) - -	1	...	1	1	3
5	Claverhouse Dairy - - - -	...	1	1	2	3
5	Claverhouse (Cottage) - - - -	1	...	1	1	2
5	Balgray Farm House - - - -	1	...	1	...	1
5	Balgray Farm, Cotton - - - -	2	...	2	6	4
5	Old Glamis Road (Rangers Houses) -	2	...	2	7	6
5	The Manse (Lodge) - - - -	1	...	1	...	2
5	Easter Kirkton (Hamlet) - - - -	3	...	5	8	7
5	Kirkgate Mains - - - -	1	...	1	1	2
5	Trottick, N.W Cottages - - - -	2	...	6	10	11
5	" N. " - - - -	2	...	6	9	11
5	" N.E. " - - - -	2	...	5	12	14
5	" N.E. " - - - -	1	...	1	2	3
5	" S. " - - - -	2	...	6	10	11
7	Balmuir Cottage - - - -	1	...	1	3	3
7	Balmuir Smithy - - - -	1	...	1	2	...
7	Magdalene's Kirkton, Cotton - -	1	...	1	4	2
7	West Mareh Farm - - - -	...	1	1	2	4
7	Balmuir, Cotton - - - -	1	...	1	2	3
7	Harestane Mill - - - -	...	1	2	2	4
7	Harestane Cottage - - - -	1	...	1	...	3
7	South Baldovan Farm - - - -	1	...	1	1	2
7	East Pitempton - - - -	1	...	1	2	2
7	Pitempton - - - -	2	...	2	2	2
7	Pitempton Cottages - - - -	2	...	2	2	5
7	517 Strathmartine Road - - - -	1	...	1	1	5
7	Station Cottage, Cox Street - -	1	...	1	4	3
7	458 Strathmartine Road - - - -	1	...	1	...	3
7	48 Americanmuir Road - - - -	1	...	1	2	2
7	West Kirkton Cottages, Kirkton Rd.	2	...	5	8	12

District Two.

Ward.	SITUATION.	NUMBER OF		TO SERVE	
		Privies or Earth Closets.	Privy Middens	No. of Households.	Persons.
					M. F.
3	168 South Road . . . .	...	1	1	2 1
3	Backhill of Balgay	2	1	3	10 5
3	Balfield Farm House and Bothy . .	...	1	2	9 3
3	Balfield, Cotton	2	...	2	7 4
3	King's Cross Cottar Houses . . .	2	...	2	5 3
7	Lawton Cottar Houses	3	...	3	11 8

District Three.

9	Blackness Nursery (Cottages) . .	2	...	2	9 4
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District Four.

1	125 Ferry Road	2	...	2	2 2
1	Strips of Craigie Road, Chaffeur's House	1	...	1	1 2
1	123 Arbroath Road	1	...	1	3 1
1	251 Arbroath Road	1	...	1	4 5
4	Bingham Terrace (Gallowhill) . .	1	...	1	3 3
4	Mid Craigie Farm (Grieve's House) .	1	...	1	2 3
4	168 Arbroath Road	1	...	1	3 4
10	208-210 Arbroath Road . . . .	...	2	2	3 5
10	399 Arbroath Road (Craigie North Lodge)	1	...	1	4 2
10	Gotterstone Cottar Houses (left) .	...	5	5	17 11
10	do. do. do. (right)	2	...	2	6 7
10	Arbroath Road Claypots Cottar Hse.	1	...	1	2 1
10	W. Balgillo Dairy (Kennedy) . . .	1	...	1	4 2
10	do. do. (Ogilvie)	1	...	1	2 2
10	51 Forthill Road	1	...	1	2 1
11	52 do. do. (McQuarrie's Houses)	3	...	3	6 5
11	Forthill Fues (Geekie)	1	...	1	2 2
11	Balgillo Road (Watt)	1	...	1	2 1
11	do. do. (Keillor)	1	...	1	4 4
11	do. do. (Grimmond)	1	...	1	2 1
11	East Balgillo Cottar House	1	...	1	3 1
11	do. do. do. do. . . .	1	...	1	2 3
11	Barnhill Farm (Grieve's House) .	1	...	1	1 2

From this list it will be seen there are 65 separate properties of 117 households occupied by 260 males and 255 females served by accommodation of this nature.

These primitive conveniences are, however, as opportunity occurs and sewerage becomes available being removed and modern conveniences provided instead. These properties are on the outskirts of the City and little or no nuisance arises.

Ashbins and Ashpits.

In the abolition of ashpits, renewals of dilapidated bins, and the provision of accommodation where previously none existed, 281 galvanised iron ashbins were provided.

The time is now at hand when the question of the total abolition of the ashpit should be considered. Those evil, foul smelling, and most insanitary eyesores have been tolerated far too long. They are the habitual breeding places of the disease carrying flies and there is little that can be said in their favour.

The bin if used properly and with a little care has a long life. The removal of the refuse enclosed in the bin direct to the cart is a much more superior method to that which is presently employed in many instances—when carried by barrow through areas and passages to a coup on the street where it awaits the arrival of the cart for removal, and which is the source of numerous complaints from shopkeepers and householders alike.

Tents and Vans.

Very few of these have been in residence within the City throughout the year, in any case not for more than a few days at a time.

In October three caravans took up a stance at Coldside, adjoining Strathmartine Road, having a population of 11 persons (both sexes) 6 adults and 5 juveniles. There was no water supply, lavatory, or ashbin accommodation, and naturally enough the residents in the properties adjoining were indignant and complaining.

I took the matter up with the owner of the encampment ground and asked him (if the caravans were to be allowed to remain) to provide sufficient water closet and ashbin accommodation, and a supply of water for domestic purposes. Instead of which, however, he gave instructions for the removal of the vans, and they were immediately taken away outside the City.

Under this head 101 visits were made. The caravans were all found in a first-class and clean condition. In fact, as a rule, one cannot give too high praise for the manner in which the interiors of these

living places are usually kept—they would make a good example lesson to many householders.

Housing of Seasonal Outworkers.

Within the boundaries of this city there is little trade done in regard to fruit growing, but a fair amount is done in potato culture. It is with the latter workers we have to contend. On the whole the terms of the recent Bye-Laws have been adhered to and carried out in as practicable a manner as the varying circumstances would permit.

Most of the workers, however, are already resident within the city, and are chiefly carried to and from their employment in the fields by motor lorry.

Schools.

Little requires to be said regarding the schools of this city. The whole are under the care of the officials of the Education Authority, and their condition may be considered satisfactory.

The question of new schools is one which is occupying the attention of the Authority concerned at the present time.

Farmed-Out Houses.

Within the meaning of the Law proper there are no Farmed Out Houses in the city—there are however houses to which the term “ Farmed Out ” might apply.

The question at the moment is receiving careful consideration together with that of Common Lodging Houses and Houses Let in Lodgings.

Factories and Workshops

Taking these places of employment as a whole they have been found in a satisfactory state and conform favourably to the Bye-Laws, Regulations or Acts of Parliament thereanent. The infringements met with are usually want of lime-washing, or cleansing of lavatories or premises generally. On the facts being brought to the notice of the occupiers steps are at once adopted to comply with the instructions of the Inspectors. Generally speaking, however, the Factories and Workshops may be regarded as coming well within the requirements of the Law, and to them 1,105 visits were made.

In former years "Home Work" loomed to a considerable extent, through sack sewing, in the inspections of the Department. This work has now, practically speaking, disappeared, and the only home workers we have are mostly employed at underclothing, etc., or tailoring and dressmaking.

H.M. Inspector of Factories called our attention to nuisances discovered in workshops in the course of his inspections. These referred to the following:—

Dirty Bakehouses, 8.

The occupier in each case was called upon and the necessary work carried out, only in one instance was a statutory notice issued.

Insufficiencies of means of escape in case of fire are now under the charge of the Firemaster and dealt with by that Official.

The following Workshops, &c., are upon the Register at 31st December, 1924.

TRADE OR BUSINESS.	Workshops	Workshops Domestic	Homework	Workplaces
Basket Makers, Feather Dressers, and Bedding Manufacturers	1	0	0	0
Blacksmiths, Cartwrights and Carriage Builders	20	0	0	2
Blacking and Chemical Manufacturers ...	3	0	0	0
Boot Repairers	104	4	0	0
Brush Makers	2	0	0	0
Cabinetmakers, Joiners, and French Polishers	81	0	0	0
Cycle and Motor Mechanics, Enamellers and Vulcanisers	32	1	0	0
Dental Mechanics	36	4	0	0
Dress, Mantle and Corset Makers ...	57	39	0	0
Engineers	4	0	0	0
Electro - Platers, Wire Workers, Blind Makers and Bellhangers	3	0	0	0
Florists	0	0	0	9
Furriers	6	2	0	0
Glaziers	4	0	0	0
Granite and Marble Cutters and Masons...	0	0	0	31
Hairdressers and Wigmakers	0	0	0	87
Hosiery and Knitters	5	2	0	0
Hotels and Restaurants	0	0	0	41
Laundries	2	3	0	1
Milliners	42	1	0	0

Painters	...	...	...	...	0	0	0	58
Photographers	...	...	...	...	18	0	0	0
Piano and Gramophone Repairers	...	...	...	...	7	0	0	0
Picture Framers, Carvers and Gilders	...	...	...	...	6	0	0	0
Plasterers	...	...	...	...	0	0	0	15
Plumbers and Tinsmiths	...	...	...	...	61	1	0	0
Saddlers and Leather Cutters	...	...	...	...	17	0	0	0
Sewing Machine and Wringer Repairers...	...	...	...	...	1	0	0	0
Slaters	...	...	...	...	0	0	0	22
Stamp Cutters, Engravers and Ticket Writers	...	...	...	...	3	0	0	0
Sugar Boilers	...	...	...	...	13	0	0	0
Tailors	...	...	...	...	79	5	4	0
Umbrella Makers and Repairers	...	...	...	...	4	0	0	0
Underclothing, Baby Linen and Blouse Makers	...	...	...	...	53	0	2	0
Upholsterers and Carpet Sewers	...	...	...	...	14	0	0	0
Waste, Rag and Metal Merchants	...	...	...	...	0	0	0	10
Watch and Jewellery Repairers and Opticians	...	...	...	...	38	1	0	2
Weighing Machine and Scale Makers	...	...	...	...	5	0	0	0
Miscellaneous, i.e., Gut Manufacturer, Mica Makers, Clay Pipe Makers, Paper Bag Makers, Bottlers, Potted Meat Manufacturers, Oil Refiners, Manufacturing Chemists, Sack Repairers, &c.	...	...	...	...	42	1	0	17
Totals	...	...	...	...	763	64	6	295

Bakehouses.

On the register there are 11 factory and 7 workshop underground bakehouses certified as suitable in terms of Section 101 of the Act of 1901.

The register gives the following figures :—

62 factory bakehouses, and
36 workshop bakehouses,
in addition there are presently four unoccupied bakehouses—one an underground factory bakehouse.

Three new workshop bakehouses have been opened and one new factory bakehouse—the latter being in place of an underground factory bakehouse.

The premises have been oil painted, varnished or whitewashed as considered expedient—where the two former was in existence and in good order, washing down with water was deemed sufficient.

The whole of these places have received a stringent and regular inspection, and they may be looked upon as coming well within the requirements of the Law thereanent—764 visits having been given to them.

In the different bakehouses there are 757 or thereby persons employed, viz. :—671 males and 86 females, and where opportunity occurs recommendations are put forth as to personal cleanliness whilst employed at the work of bread making.

Common Lodging-Houses.

At the end of 1924 there was only one house which came within the definition of a “ Common Lodging House ” as given in the Public Health (Scotland) Act, 1897,” viz. :—

18 Peter Street with accommodation for $21\frac{1}{2}$ lodgers, and to it 53 visits have been made by day and 5 by night. It has been kept in a satisfactory condition throughout the year.

Early in 1925 the “ Dundee Corporation and Water and Gas Order Confirmation Act, 1925 ” came into force.

Through Section 55 of this Order the charge per night has been raised to one shilling, with the proviso that the Corporation may, with the consent of the Scottish Board of Health, diminish or again raise the sum payable per night, but “ so as not to exceed one shilling and sixpence per night.”

This means that the following houses (now registered as “ Houses Let in Lodgings,”) which are to all intents and purposes “ Common Lodging Houses,” fall to be registered as such :—

- 19 Overgate.
- 43 Overgate.
- 77 Overgate.
- 97 Overgate.
- 130 Overgate.
- 55 Commercial Street.
- 25 North Lindsay Street.
- 2 and 3 Craig Street.

Houses Let in Lodgings.

At the end of the year there were 102 houses registered as "Houses Let in Lodgings," and to them 547 visits were made by day and 314 by night. With the exception of instances of overcrowding or want of proper separation of sexes all were found in a satisfactory and fairly clean state.

In my former reports I have so exhaustively dealt with overcrowding and want of sex separation that I need not here reiterate what I have so forcibly written in previous years. There are no material alterations on the living conditions that I can go into, and until sufficient and suitable housing accommodation is provided for all classes of our population, these kinds of contraventions—however laudable their elimination may be—will continue.

The Seamen's Boarding House and **The Salvation Army Home and Metropole for Women** have both been kept in a thorough condition and well patronised.

Early in 1925 I as a Designated Officer under the Housing, &c., Act, issued a report on the

Housing

conditions for the year 1924, showing exactly how the position then stood, what had been done since the housing shortage became a sore with us and what yet remains to be accomplished ere this canker is removed from our midst, indicating the overcrowding conditions under which a certain section of our community live, illustrating instances which were met with, &c.

This report was circulated amongst the members of the Town Council, &c., and copies sent to the Scottish Board of Health. It contained all that was known under this head, and the particulars stand as at the end of 1924. Sufficient it is for me to say here that "House Shortage" still is and will, in my opinion, remain for some time to come, a subject that will to the full exercise the minds of the members of the Town Council and have to be grasped with ere the demand of the citizens are met.

This report also contained details of the proceedings under the

Increase of Rents and Mortgage Interest (Restrictions) Act, 1920.

and which I here give in detail.

Applications made under the 1920 and 1923 Acts, 3.

Granted, 2

Refused, 1

One application was received in addition to the above, but on enquiry it was discovered that the rent of the house was the same as in 1914—thus rendering the application invalid. The condition of the house, however, justified immediate action being taken by the Department, and in consequence it was “Voluntarily Closed” by the proprietor as “unfit for human habitation.”

Referring to the two certificates granted. In one instance a tenant was sued in Court by the proprietor for the arrears of rent he had been withholding for several weeks. He produced the certificate of the Sanitary Authority and it was decided—the owner agreeing—to reduce the rent to the 1914 standard.

In the other case, on the proprietor learning the tenant had been granted a certificate, immediately proceeded to carry out the necessary repairs.

In my last report I mentioned a case involving some 24 dwelling houses of 2 rooms, where the Town Clerk was instructed to take action on behalf of the “Sanitary Authority” under Section 2 (sub-section 2) of the 1920 Act, to have the increase of rents suspended.

The owner, after being communicated with, agreed without recourse to Court to suspend the increases until the whole of the work specified had been completed to the satisfaction of the Sanitary Inspector. On its completion, some 16 weeks afterwards, he applied for permission to re-impose the increases, and this was granted.

Dairies, Cowsheds and Milkshops.

Cowsheds.

At the end of the year we had 993 dairy cows housed in 57 cowsheds producing milk for our Citizens. Throughout the year we have taken stringent measures to insist on the cows being kept clean, both in body and surroundings, bedding, etc. The inspectors have also impressed upon the milkers and handlers the necessity for personal cleanliness. The byres have been kept in quite a satisfactory manner, and little or no cause for complaint or interference has occurred—the premises being lime-washed twice during the year. To the various byres, dairies, and shops of Purveyors of milk 3,018 inspections were made.

The byre at No. 59 Gray Street, Lochee, has been extended and improved giving 3,645 extra cubic feet with accommodation for $4\frac{1}{2}$ additional cows, bringing the space up to equal 15 animals.

At No. 26 Back Street a new byre of 8,027 cubic feet with accommodation for 10 cows has been erected.

Undoubtedly one of the finest equipped cowsheds and dairies within the City has been provided at South Mains of Baldovan. This was previously a farm stead-ing getting into a state of disrepair and dilapidation. The interior has been gutted out and the whole fitted up with accommodation for 53 cows. The work has been finished in an up-to-date method. The water troughs are on the self feeding principle; walls, dividers and flooring have been finished in Keen's cement so that the whole can be cleansed by water flush. The milk house is fully equipped and provision for the scalding of cans and utensils and for the cleanly handling of the milk.

For some years we have had a difficulty with the drainage of the dairy at Harestane Road. A new complete system of drainage is now laid down; a cess-pool with chain pump attached for the removal of manure liquid, and water closet accommodation provided for the use of the occupier.

At Newton of Baldovan the north byre has been considerably improved by the removal of the old roof; adding to the height of the walls and a new roof with more ventilation provided instead.

The court or yard in connection with the dairy premises at No. 306 Strathmore Avenue has been put in proper order through the laying down of 195 square yards of blocks.

In terms of the Milk and Dairies (Amendment) Act, 1922, the Registers pertaining to (1) Producers, and (2) Retail Purveyors of Milk within the Burgh now stands as follows:—

PRODUCERS.

On Register 1st January, 1924	...	...	57
Added during the year	...	...	4
Removed during the year	...	...	4
Total at 31st December, 1924	...	...	57

made up as follows:—

Producers (also registered as Retail Purveyors)	56
Producers (Wholesale only)	1

RETAIL PURVEYORS.

On Register 1st January, 1924	...	...	725
Added during the year	...	...	229
Removed during the year	...	...	125
Total at 31st December, 1924	...	...	829

made up as follows:—

Purveyors from Shops	...	...	701
Producer Purveyors (22 from dairy premises only and 34 from dairy premises and vans on streets)	...	...	56
Purveyors from Vans	...	...	47
Purveyors resident outwith the City, but Registered to purvey milk within it from Vans	...	...	25

giving a grand total of Producers and Retail Purveyors as follows:—

On Register at 1st January, 1924	...	...	782
Added during the year	...	...	233
Removed during the year	...	...	129
Total at 31st December, 1924	...	...	886

Included in the figures given as Purveyors from shops are 430 whose Registration only covers the sale of Sterilised Milk in Sealed Bottles.

The Milk (Special Designations) Order (Scotland), 1923.

Persons licensed to sell Graded Milk in terms of above Order during 1924	...	...	29
as under:—			
Producers	...	...	2
Purveyors	...	...	27

Sterilised Milk.

At the beginning of the year we had 336 persons registered as Purveyors of Sterilised milk in sealed bottles. By the end of 1924 the number had increased to 430 which adds considerably to the number of persons registered to sell milk by retail.

This method of distribution as is also employed in Pasteurised milk is a step in the right direction towards a cleaner milk supply.

I understand there has also been a good demand for milk of this description.

Milk and Dairies (Amendment) Act, 1922, and The Milk (Special Designations) Order (Scotland) 1923

Section 3 and 14 of the Milk and Dairies (Amendment) Act, 1922, prohibit the sale of milk under the following designations except in accordance with a licence granted by the Scottish Board of Health, or with their authority. The designations are:—

1. Certified Milk;
2. Grade A. (Tuberculin tested) Milk;
3. Grade A. Milk; and
4. Pasteurised Milk.

The Milk (Special Designations) Order (Scotland), 1923, issued by the Scottish Board of Health, authorises local authorities to grant licences to sell milk under any of the above designations within their area, and this Order describes the conditions under which such licences may be granted.

In the middle of the year a firm of aerated water manufacturers in the north end of the City laid down plant for the production of pasteurised milk. An entirely new building was erected and fully equipped with the most modern appliances on the market.

Another firm, long established as Purveyors of Milk, also commenced the output of this grade of milk, after extension to premises, alterations and additions to their plant etc.

During the year 29 applications for licences for the production or sale by retail of this class of milk were made:—

2 as producers and
27 as retailers.

Three of the retail licences were allowed to lapse at the end of the year—leaving 26 on the register.

The Public Health Committee remitted the matter of investigation and recommendation for licenses to the Medical Officer of Health and myself.

The premises of the producers were carefully gone over and thereafter the Local Authority advised to grant licences.

In the retail applications the premises, methods of storage and distribution were also fully investigated and the licenses granted.

This milk has taken on with the public to a marked degree and I understand the output has gone on increasing week by week and, as a business proposition, come well up to expectations.

The milk leaves the producers premises in sealed glass bottles, and is sold to the consumer in this receptacle—thus the contamination in handling is reduced to a minimum whilst it is immune from shop dust.

The subject of the registration of retail purveyors of milk, in view of the large number of applications, will be reconsidered shortly, and Dr Burgess, the Medical Officer of Health, has prepared and issued a memorandum on the whole subject, which will be submitted to the Dairyemen's Association for observation thereon.

Public Health (Condensed Milk) Regulations (Scotland), 1923.

These became operative on the 1st October, 1923,

but no action was taken in the shape of putting them into force until 1924, so that old stock which could not comply—so far as labelling was concerned—would be cleared out.

Five tins as test samples were purchased during 1924. They were the products of four different manufacturers, and in each case were found to comply with the Regulations.

Transfer of Milk from one vessel to another.

The Regulations, made under Article 13 of the Dairies, Cow-Sheds and Milk Shops Order of 1885, came into force on the 18th July, 1923.

Their enforcement has been taken in hand by the Police, and they have carried through the duties in an exceedingly satisfactory manner. It is, practically speaking, impossible for the staff of this Department to detect these contraventions, as they usually take place in the early hours of the morning, when the milk trade is in operation all over the City. It was hoped the two prosecutions which took place towards the end of 1923 would act as a deterrent, but throughout 1924 nine contraventions were discovered by the Police and the offenders brought before the Magistrates, when the following fines were imposed:— one was fined 21/-; three were fined 20/- each; three were fined 10/6 each; one was fined 10/-; and one was dismissed with an admonition.

No premises have been specially set aside as “approved premises” by or belonging to the Local Authority, but applications have been made by Companies or persons engaged in the milk trade to have private premises “Approved” by the Local Authority, and there are 11 of those now on the Register.

Milk and other foods for Bacteriological Examination.

Samples of the following foods have been procured

by the Food Inspectors for bacteriological examination :—

Sweet milk	...	...	...	...	...	...	79
Chicken, ham and tongue paste	...	...	...	...	...	...	1
Cream	...	...	...	...	...	...	1
Whipped cream	...	...	...	...	...	...	1
Cream strawberry tart	...	...	...	...	...	...	1
Cream fancy cake	...	...	...	...	...	...	1
Cream cookie	...	...	...	...	...	...	1
Cream cake chocolate	...	...	...	...	...	...	2
Cream (double)	...	...	...	...	...	...	1
White of pickled eggs	...	...	...	...	...	...	1
							<hr/> 89

These were submitted to Prof. W. J. Tulloch, at the University College, the official Bacteriologist.

The results of the examination are fully dealt with by the Medical Officer of Health in his report.

Food Inspection.

FOODSTUFFS ARRIVING AT THE PORT OF DUNDEE, EITHER DIRECTLY FROM ABROAD OR BY COASTWISE TRAFFIC.

The following two tables show the kind and quantity of foods arriving by waterway at the Port during the year.

The total of 35,368 tons 12 cwts., as against 32,535 tons 5 cwts. last year and 31,291 tons 10 cwt. during 1922.

TABLE No. I.

Shows the foodstuffs arriving coastwise at the Port by steamers plying between Dundee and the Ports of London, Hull, Liverpool, Aberdeen, Newcastle, Belfast, Southampton, Leith, &c., during 1924 :—

					Tons.	Cwts.	Qrs.
Bacon and Ham	...	...	...	...	50	6	0
Butter	...	...	...	...	299	7	2
Biscuits	...	...	...	...	0	0	3
Cereals	...	...	...	...	327	15	3
Cheese	...	...	...	...	421	11	2
Cocoa Butter	...	...	...	...	1	10	0
Cordials	...	...	...	...	3	16	0
Chemical Food	...	...	...	...	4	14	0
Cocoa and Cocoa Beans	...	...	...	...	185	0	3
Cocoanut, Dessicated Cocoanut and Cocoanut Stearine	...	...	...	...	58	4	0

					Tons.	Cwts.	Qrs.
Coffee	...	...	...	...	30	15	2
Confectionery			...	...	426	9	2
Corn Flour		...	...	...	1	5	2
Cream of Tartar			...	...	10	1	3
Eggs	...	...	...	...	5	5	2
Eggs (dried and liquid)			...	...	10	8	1
Fish (dried)	...	...	...	...	11	4	0
Fish (tinned)	...	...	...	...	132	6	2
Flour	...	...	...	...	3,946	9	1
Fruit	...	...	...	...	860	8	0
Fruit (dried)	...	...	...	...	433	10	0
Fruit (pulp)	...	...	...	...	278	17	0
Fruit (tinned)	...	...	...	...	150	17	3
Glucose	...	...	...	...	315	19	3
Lard and Lard Compound			...	...	400	11	1
Macaroni	...	...	...	...	3	8	3
Margarine	...	...	...	...	541	12	2
Meat (tinned)	...	...	...	...	399	16	0
Milk (dried)	...	...	...	...	6	3	1
Milk (tinned)	...	...	...	...	19	10	0
Nuts	...	...	...	...	42	8	0
Oatmeal	...	...	...	...	3	12	2
Pickles, Spices and Condiments				...	67	4	2
Preserves	...	...	...	...	168	15	2
Rice	...	...	...	...	171	10	2
Sago and Sago Flour	...	...	...	...	23	5	2
Semolina and Semolina Flour	...			...	1	6	1
Sugar	...	...	...	...	513	0	0
Syrup	...	...	...	...	295	8	3
Tapioca and Tapioca Flour	...			...	213	9	2
Treacle	...	...	...	...	251	0	2
Vegetables	...	...	...	...	716	7	0
Vegetables (tinned)	...	...	...	...	18	1	1
Vinegar	...	...	...	...	50	17	1
					11,873	13	1

TABLE No. II.

Shows the amount and kinds of food arriving direct from abroad, for the year ending 31st December, 1924.

					Tons.	Cwts.	Qrs.
Butter	...	...	...	...	3	10	0
Cereals	...	...	...	...	208	13	2
Cheese	...	...	...	...	57	5	1
Cocoa and Cocoa Beans	...			...	9	14	1
Cocoa Butter	...	...	...	...	47	10	0
Cocoanuts	...	...	...	...	10	0	0
Confectionery	...	...	...	...	1	10	2
Cream of Tartar	...	...	...	...	2	16	0
Flour	...	...	...	...	11,982	8	0
Fruit	...	...	...	...	364	9	1
Fruit (dried)	...	...	...	...	1	7	2
Fruit (pulp)	...	...	...	...	8	1	3

					Tons.	Cwts.	Qrs.
Glucose	...	...	...	...	1,042	17	0
Lard	...	...	...	...	85	13	0
Macaroni	...	...	...	...	1	7	2
Meat (tinned)	...	...	...	...	16	16	0
Milk (dried)	...	...	...	...	2	6	1
Milk (tinned)	...	...	...	...	124	8	1
Oatmeal	...	...	...	...	51	5	0
Preserves	...	...	...	...	7	15	0
Rice	...	...	...	...	32	3	0
Sugar	...	...	...	...	8,903	1	3
Syrup	...	...	...	...	39	15	1
Treacle	...	...	...	...	39	13	1
Vegetables	...	...	...	...	450	11	2
					23,494	18	3
Total for Home Ports (Table I.)					11,873	13	1
Total					35,368	12	0

Including in table 1 is 2 tons of potatoes found unfit for human food, but allowed out for pig feeding only.

No other section of the cargoes was detained.

Food Inspection (Shops, Stalls, etc.)

On 44 separate occasions (as against 85 last year) it was deemed expedient to take possession of food as unwholesome and unfit to be used for the food of man. It was unnecessary to institute legal proceedings as the foods were submitted for inspection and seizure agreed to. The cause of the seizures was in each case "decomposition"—the foods having been kept too long. The majority of the foods were in small quantities with the exception of carrots and potatoes—the big proportion of which had just reached the City and been delivered to the customers who reported the condition to this Department. In cases where it was considered practicable—rather than have a total loss or destruction—the carrots and potatoes were allowed out for pig feeding.

A considerable number of small tins of food—meat, fruit, fish, salad, pickles and sauces, etc.—were submitted and taken possession of, but in total weight they were infinitesimal.

We have been completely immune from seizure of

butcher meat in shops. I should think few towns or cities of any pretensions to size can put up such a clean record so far as butcher meat exposed for sale is concerned. All our butcher meat has to go through the Clearing House in operation at the Slaughter-houses and Dead Meat Market, where it is inspected in terms of the Public Health (Meat) Regulations (Scotland) 1924, by the Meat Inspectors there ere it is allowed out for sale in the shops. This applies to all meat coming into the City by road or rail.

The stalls and barrows on the street daily and in the Greenmarket every Friday and Saturday are also inspected. Here a considerable amount of food stuffs consisting chiefly of fish, butcher meat, fruit, vegetables, sweets etc. are offered for sale, but it is very seldom any action has to be taken.

The booths or stalls in the New Market or Arcade have been kept in a satisfactory condition. Usually the same class of foods as is offered in the Greenmarket is exposed for sale.

Under this head the Inspectors made 8.708 visits during the year. Full details of the various kinds of foods seized and the quantities will be found in the appendix to this report.

Public Slaughter-Houses and Meat Inspection.

In former years exhaustive tables showing the amount of meat seized at the Public Slaughter Houses and Dead Meat Market were given in my annual report indicating the various diseases for which the meat was condemned. However, this information is, as from 1st June, 1923, now tabulated by the Superintendent and Detention Officer there who is responsible for the Returns to, as per the instructions of the Scottish Board of Health

During the year 35 inspections were made at the Slaughter Houses.

Fish Inspection at the Fish Market, Carolina Port.

The Superintendent visits this Market every morning and an arrangement exists with him that whenever suspicious consignments of fish are offered for sale he

detains them and communicates with this department by 'phone. An Inspector is immediately despatched to the Market who examines the fish, which are usually submitted for inspection, and if found unfit for human food voluntarily handed over.

On three different occasions only was it found necessary to take action, through which

5 cwts., 1 qr. and 0 lbs. of smoked fish, and

0 cwts., 1 qr. and 20 lbs. of shrimps

were retained and destroyed by being passed on to the Cleansing Department for use as farm manure.

We are, however, so far as this market is concerned comparatively immune from tainted fish being offered for sale.

The fish arrive fresh off the trawlers; as a rule being sold the same morning, and, with the exception of that bought for the wants of the City's population, despatched by rail or cart to destinations outwith the Burgh.

The market is usually visited once a week—sometimes oftener—by the Inspectors of the Department, who also make a survey as to the cleanliness of the boxes, appliances, premises, etc. Here again there is little cause for interference as an abundant supply of water is in evidence for flushing, etc., purposes.

During the year there were landed 7,622,892 lbs. of various kinds of fish as against 8,322,160 lbs. last year.

Importation of Canadian Cattle.

During the year six consignments of cattle arrived at the Harbour, with a total head of 1,593. Their stay in the City is usually short as the sales take place immediately after arrival and the animals are despatched to their several destinations.

The lairage and market have been kept in a good condition and no nuisance therefrom has occurred.

Butter and Margarine Acts.

Three premises are registered for the re-working of

butter under Section 1 (1) of the Butter and Margarine Act, 1907.

Two samples of re-worked fresh butter were taken and submitted to the Public Analyst who reports them to be genuine.

At the beginning of the year there were 33 persons registered as wholesale dealers in margarine or margarine cheese under Section 7 (4) of the Food and Drugs Act, 1899. During the year one was added and one removed—thus leaving the figures still at 33.

The premises have been regularly inspected throughout the year.

They are usually efficiently kept and call for little official interference.

Food and Drugs Acts.

Undernoted I give a statement of the number of samples purchased under these Acts during the last twenty-two years :—

		Certified to be		
		Purchased.	Genuine.	Adulterated.
1903	...	144	130	14
1904	...	200	170	30
1905	...	199	170	29
1906	...	201	169	32
1907	...	215	184	31
1908	...	257	234	23
1909	...	304	274	30
1910	...	455	414	41
1911	...	445	415	30
1912	...	435	411	24
1913	...	484	449	35
1914	...	607	566	41
1915	...	615	588	27
1916	...	619	590	29
1917	...	610	578	32
1918	.	629	598	31
1919	.	607	582	25
1920	.	602	578	24
1921	.	663	629	34
1922	.	671	650	21
1923	..	669	634	35
1924	..	684	659	25

The following is a synopsis of the samples purchased this year:—

I.—Samples taken in the ordinary course, with a view of following up by prosecution, if necessary, should adulteration be discovered.

				Certified to be	
				Genuine.	Adulterated.
			Purchased.		
Sweet Milk	...	...	309	290	19
Margarine	...	...	29	29	0
Coffee	...	...	12	12	0
Ground Rice	...	...	6	6	0
Rice (Whole)	...	...	12	12	0
White Pepper	...	...	21	21	0
Black Pepper	...	...	2	2	0
Lard	...	...	2	2	0
Cream of Tartar	...	...	19	19	0
Tapioca	...	...	5	5	0
Ground Ginger	...	...	10	10	0
Baking Soda	...	...	7	7	0
Cinnamon	...	...	15	15	0
Pot Barley	...	...	5	5	0
Salted Butter	...	...	1	1	0
Spice	...	...	1	1	0
Total			456	437	19

II.—The following samples were taken in terms of Section 2 of the Butter and Margarine Act, 1907:—

	Taken.	Genuine.	Adulterated.
Sweet or Fresh Butter ...	2	2	0

III.—The undernoted “test” samples were purchased by deputy:—

				Certified to be	
				Genuine.	Adulterated.
			Purchased.		
Sweet Milk	...	...	35	33	2
Condensed Milk	...	...	5	5	0
Margarine	...	...	35	34	1
Salted Butter	...	...	6	5	1
Fresh Butter	...	...	1	1	0
Cream	...	...	1	1	0
Oatmeal	...	...	4	4	0
Pot Barley	...	...	2	2	0
Flour	...	...	10	10	0
Ground Ginger	...	...	4	4	0
White Pepper	...	...	19	19	0
Black Pepper	...	...	1	1	0
Rice (Ground)	...	...	3	3	0
Rice (Whole)	...	...	7	7	0
Cream of Tartar	...	...	11	11	0
Cream Puddings	...	...	1	1	0
Coffee	...	...	4	4	0
Vanilla and Lemon Essence	...	...	5	5	0
Tapicoa	...	...	1	1	0

Treacle	...	...	1	1	0
Tinned Fish	...	...	3	3	0
Baking Soda	...	...	3	3	0
Baking Powder	...	...	1	1	0
Ice Cream	...	...	6	6	0
Tinned Beef	...	...	1	1	0
Whipped Cream	...	...	1	1	0
Potted Meat Paste	...	...	3	3	0
Mixed Pickles	...	...	1	1	0
Sauces	...	...	7	7	0
Cream Cakes	...	...	5	5	0
Jam	...	...	2	2	0
Double Cream	...	...	1	1	0
Custard	...	...	4	4	0
Syrup	...	...	1	1	0
Spice	...	...	2	2	0
Tinned Peas	...	...	1	1	0
Fruit Salad	...	...	1	0	1
Fruit Relish	...	...	1	1	0
Whisky	...	...	1	1	0
Whites of Pickled Eggs			1	1	0
Cinnamon	...	...	8	7	1
Mustard	...	...	3	3	0
Vinegar	...	...	4	4	0
Glycerine	...	...	3	3	0
Olive Oil	...	...	2	2	0
Castor Oil	...	...	3	3	0
Ammonia	...	...	1	1	0
Total			226	220	6
Add Table I.			456	437	19
Add Table II.			2	2	0
Total			684	659	25

With a population of 171,295 this works out to 3.99 samples to every 1,000 persons, as against 3.91 in 1923.

344 samples of sweet milk were purchased or taken—309 official and 35 tests—as against 331 last year.

The lowest milk fat recorded this year was 2.28% (as against 2.22 last year) and the highest 5.70% (as against 6.08 last year), whilst the average milk fat was 3.55% (as against 3.60% last year). The number of samples with milk fat below 3% was 15 and the number with milk fat above 4% 39.

The average monthly milk fat of official samples purchased was as follows:—

			No. of samples purchased	Average fat.
January	...	...	26	3.42
February	...	...	24	3.72
March	...	...	24	3.48
April	...	...	24	3.49
May	...	...	28	3.41
June	...	...	25	3.71
July	...	...	31	3.46
August	...	...	23	3.60
September	...	...	27	3.55
October	...	...	26	3.63
November	...	...	24	3.55
December	...	...	27	3.50

Nineteen samples of sweet milk (as against 29 last last year) were certified by the Public Analyst to be adulterated with either added water or skimmed milk.

Five prosecutions involving six milk samples were instituted and convictions recorded in each case.

The following were the court decisions:—

two were fined £4 each, and
three were fined £2 each.

The average cost of each prosecution was £1 7s. 2d.

The remainder of the sellers of adulterated milk samples were warned.

One purveyor of milk who had three convictions recorded against him for selling adulterated sweet milk was, after all the requirements of the Milk and Dairies (Amendment) Act, 1922, thereanent had been gone through, ordered by the Local Authority to be removed from the Register.

Six samples of sweet milk were certified to be coloured with annatto, and the sellers were reported for prosecution under Section 4 (Sub-Section 1) of the Milk and Dairies (Amendment) Act, 1922. A fine of 15/- was imposed upon each. In prosecutions of this nature, however, the Crown claims the fine, the whole cost of the proceedings having to be borne by the Local Authority in whose district the offence takes place. In ordinary milk adulteration cases the fine goes towards the prosecution—usually covering the cost. To

say the least it is unfair that the Citizens should have to bear the burden of the carrying through the provisions of the Act and the State Authorities, who have no expense in the matter, retain the fine. These six annatto cases cost the community the sum of £7 1s to enforce the Law.

For selling margarine without the wrapper as required by the Margarine Act, two sellers were prosecuted and fined £1 each.

Six of the sweet milk and six of the salted butter samples were purchased in Restaurants.

One of the sweet milks was found to be adulterated with skimmed milk and one of the salted butters was reported to be margarine. In my report last year I mentioned that I had found these foods as purveyed in several of the establishments within the City far from satisfactory and I had hoped the warnings then given would put an end to this cruel fraud on unsuspecting customers. However, in at least a couple of establishments, so far as I have been able to trace the warnings have not been taken advantage of. Certain it is a watchful eye will be still kept on these places and the probability is, should further contraventions of this nature be discovered, the names of the offenders will be openly laid before the Public Health Committee and the particulars sent to the Procurator Fiscal for him to take action in Court. If warnings and advice will not put an end to this nefarious practice—from which the unsuspecting customer has no redress—then the latter more drastic procedure ought to.

One sample of margarine was certified to contain .76 per cent. of boric acid. (.30 per cent. is the limit).

One sample of fruit salad was certified to contain 2.69 grains of tin per lb. (The limit is 2 grains).

One sample of ground cinnamon was certified to contain 5.83 per cent. sand or silicious matter. (2 per cent. is the limit).

The sellers of these three samples were warned.

The Public Health (Dried Milk) Regulations (Scotland) 1923.

These Regulations came into force on the 1st May

1924 and in December 1923 the Public Health Committee appointed Officials to carry out their requirements. During the year now under review no action was taken. I hope, however, during 1925 to have progress to report.

Ice Cream.

Although we have no fixed or arbitrary standard for this commodity I purchased six samples which are reported on by the Analyst as follows:—

Water.	Total solids.	Fat.	Solids—non-fatty, milk solids, starch, sugar.	Ash.
76.40	23.60	1.08	22.52	.32 per cent.
72.80	27.20	1.36	25.84	.41 "
70.80	29.20	.96	28.24	.54 "
70.16	29.84	.96	28.88	.58 "
74.64	25.36	1.12	24.24	.50 "
76.16	23.84	1.24	22.60	.57 "

These figures indicate a very low quality.

I therefore convened a meeting with the Representatives of the Local Ice Cream Vendors Association—there are 109 ice cream dealers within the City—and after talking the matter over with them, showing them the above figures, I was promised their support in an endeavour to raise the standard of this commodity and which I have every reason to believe will result in a better class of ice cream being offered for sale to the public. We want it at as high a status as possible and near the milk fat standard.

Sausages.

In the coming year I hope to give this class of food more attention as to its composition and the nature of the preservatives used in the manufacture thereof.

Preservatives in food generally are dealt with by the Medical Officer of Health in his Report.

Interments.

UNDER SECTION 69 OF THE PUBLIC HEALTH (SCOTLAND)
ACT, 1897.

67 applications were made at the office for the burial of bodies of persons who were destitute or had

not friends able to assist in the expense of burial. Of these 66 were granted, while the remaining case was otherwise arranged.

The ordinary debit against the rates under this head amounted to £106 8s, but from this sum £11 14s falls to be deducted—this amount having been received through the medium of Insurance Companies or payments by relatives, and which was credited towards the estimate under this head by the Police Treasurer to whom it was remitted. Of the interments carried through 11 were adults and 55 juveniles.

Burial Grounds.

No material change has taken place on these as when referred to in my Report of last year. They have been well and satisfactorily kept.

The following interments were made in each :—

Eastern Necropolis	...	...	...	1,584
Western Necropolis	...	...	...	1,095
Western Cemetery (Perth Road)	...	...	...	183
Barnhill Cemetery	...	...	...	192
Parish Church Burying-Ground (Broughty Ferry	...	...	...	14
Roodyards Burying-Ground	...	...	...	1
Old Mains Cemetery	...	...	...	7
New Mains Cemetery	...	...	...	25
Total				3,101

Smoke Nuisance Abatement.

“ Bonnie Dundee ” is a term often applied to our ancient City, but there are times when we must admit the saying is somewhat of a misnomer, and when our huge chimneys belch forth, “ Smoky Dundee ” is more applicable. Not that this City is alone in the category, for the smoke nuisance is by no means a local affair, but a world-wide one.

The question may be asked, “ What is Smoke ” ? Smoke consists of small minute particles of carbon, together with a sticky, tarry matter, which settles on and clings to everything it comes in contact with. Commonly, we might say it is dirt, and the same applies to the unconsumed carbon in the air. There is no question of smoke and carbon being injurious to health even although we find city people living to a

ripe old age, **but smoke did not lengthen their lives.**

Buildings soon lose their fresh surface appearance, and in a short time even the material itself shows signs of crumbling and decay. Vegetation growth is impeded in smoky atmospheres, the pores of the plants get clogged with the smuts and their respiration impeded, and the same may be said of the Town dweller, for they are, to a certain extent, deprived of the beneficial effects of the sun's rays, which cannot at times penetrate the smoke barrage.

Within recent years the question of smoke abatement has been more acutely gone into, and numerous appliances have been placed upon the market which claim to eliminate this nuisance.

There are, however, many who ignore the question of its abatement or suppression, who ought to be pioneers in its elimination.

Even with the installations presently in use at many of our mills and factories far better results could be obtained through more careful stoking on the part of the firemen. This is vividly in evidence when excessive smoke emission is brought prominently under the notice of occupiers of works, and firemen. Usually a considerable improvement is observed at the chimney head for a time, but careless stoking again asserting itself, the beneficial results are soon on the wane. If stokers would now and then take a look at the chimney heads under their charge—see at times the nuisances they belch forth—their conscience would spur them on to keep this atmospheric pollution within respectable bounds.

During the year 85 observations of one hour's duration each were taken of the smoke issuing from the chimneys of mills and factories or other stalks. Owing to excessive emission of smoke 45 warning letters were sent to the occupiers. This had a satisfactory effect for a time, but unfortunately, in several instances, a recurrence of the nuisance was again evident, which meant a repetition of the procedure

It must, however, be quite understood that the health of the public must be protected under this head, and unless permanent improvements are effected I rather fear more drastic steps will have to be adopted.

Besides, with each observation occupying one hour, it must be evident the excessive amount of time the endeavouring to put down this nuisance calls upon the Department, which could be utilised in other beneficial work on behalf of the Community.

A large firm in the north-east end of the City, whose chimney has been an eyesore for many years, have, in view of many warnings and trouble with steam raising, agreed to practically scrap the existing plant and proceed with an exhaustive installation of boilers, &c., in a new building to be erected on ground recently acquired to the north-west of the present stance. This will do away with the ponds which have been a nuisance and practically stinking holes of stagnant water for a considerable time.

Thus two very prominent nuisances in this district will be removed, and a modern building in keeping with the status of the works will be raised. It is expected these improvements will be in working order by the resumption after the annual holidays in 1925.

Shops Acts.

The efficient carrying out of the work incidental to the provisions of the above Acts has occupied a considerable amount of the time of the Inspectors—mainly after the regular working hours of the Department. The streets have to be patrolled in the evenings to see that the Closing Hours fixed by the various Orders are complied with, and as there are some 3,533 shops of different trades situated all over the city, the wide sphere of operations under this head will be readily understood.

The enactment as to meal hours, employment of young persons and children, half holidays for assistants, exhibition of necessary notices, &c., have been attended to, as well as the supply of seats for female shop assistants as required by Section 3 of the Act of 1912.

Any complaints made by employees regarding infringement of the different sections of the Acts or

Orders, or by neighbouring shop occupiers of shop-keepers remaining open for the service of customers after the Closing Hours, receive attention, and where cause for the complaints are found to exist, effective steps taken to discontinue the contraventions. The small shop-keepers as a rule are the most serious or persistent offenders—the shop-keepers on a large scale requiring little or no supervision—in fact, they are grateful for the shorter hours of keeping open shop. Keen competition of the larger shops doubtless induces the trades people on a smaller scale to keep open after hours.

NEW CLOSING ORDER.

This Order, which was in the course of going through at the time of issuing my Report of last year, passed and was confirmed by the Secretary for Scotland on 26th April, 1924. It applies to the retail trade or business of Ironmonger and Hardware Merchants (excepting China, Crystal, Stoneware, Earthenware, Fancy Goods, Toy and India Rubber Merchants). It provides for all shops being closed for serving customers on Mondays, Tuesdays, Wednesdays and Fridays at 7 p.m., and on Thursdays and Saturdays at 8 p.m. throughout the year.

Places for Public Refreshment.

The Shops (Early Closing) Act of 1920 placed the work of inspection of the above premises upon the Shop Inspectors which meant a considerable augmentation to the duties. There are 218 shops registered under the Bye-Laws applicable thereto, and to say the least, many of the occupiers are not over careful to keep within the exact letter of the Law.

Work under the various Shops Acts, Closing Orders and Bye-Laws occasioned 4,199 visits, and in addition 376½ hours were spent on street patrol duty. Contraventions discovered numbered 205. The big majority of these being of a minor description, and (with the exception of 32 prosecuted) warnings were deemed sufficient. Of the prosecutions instituted the following were the Court results:—

One was fined £4 (1 or more previous convictions).

Three were fined £3 each (1 or more previous convictions).

One was fined £1 (1 or more previous convictions).

Twenty-six were fined 15/- each and one was admonished. (first conviction).

Theatres and Cinemas.

Through the instructions of the Police and Lighting Committee the inspection of these places of amusement is placed upon this Department so far as their sanitary condition, ventilation, cleansing, &c., are concerned. They have been regularly visited throughout the year, 155 inspections having been made. Taking them all over they give little cause for action, they are well kept, the ventilation is good, and the sanitary condition and conveniences all that can be desired. Any improvement that may from time to time be desired is always readily given effect to upon the matter being brought under the notice of the Licensee.

Rag Flock Act.

During the year eight samples of rag flock were taken in the premises of bedding factories, &c., and submitted to the Public Analyst, who reported all the samples to be within the standard of 30 parts of chlorine per 100,000 parts of flock.

The figures as prepared by the Analyst on the samples submitted are as follows:—

One sample yielded	...	...	4.16 parts.
One sample yielded	...	...	4.20 parts.
One sample yielded	...	...	4.98 parts.
One sample yielded	...	...	3.40 parts.
Two samples yielded	...	...	5.00 parts.
Two samples yielded	...	...	3.30 parts.

Rats and Mice (Destruction) Act, 1919.

The following is an account of the extra-ordinary extermination crusade carried out during the week from 24th to 29th March, the result of which may be deemed satisfactory.

In this campaign, in order to stimulate an interest and at the same time enlist active sympathies and co-operation in the work, the public were given an opportunity of witnessing at first hand the striking evidence of the destruction done by the rodents and their potentialities for creating epidemics of mysterious ailments.

Through the good offices of the Secretary of the Incorporated Vermin Repression Society, the loan on hire of a striking film entitled "An Enemy within our

Gate " was obtained and shown for the first time in Scotland. At 17 different cinema theatres on 12 week days this film was shown to large and, apparently, interested audiences.

2,500 notices or handbills were served at all likely places, such as shops, bakehouses, restaurants, dairies, stables, piggeries, mills and factories, workshops and warehouses, &c., where rats might be harbouring.

400 posters were displayed within the city and at the harbour, and the interest of all concerned was aroused by advertisements and the articles in the public press.

Special instructions were sent to 17 farmers within the city area detailing an effective method for the destruction of the vermin during threshing operations and at farm steadings in general. Most of these farmers took up the scheme enthusiastically, and accounted for 283 of the total rats killed during the week.

The masters of all vessels were served with handbills, and a copy of the special instructions as to the providing of rat-guards, &c., on the mooring ropes or cables; and within the sheds and warehouses at the harbour organised rat hunts accounted for a total death-roll of 214, including one black rat (*rattus rattus*) at the port of Dundee.

99 special complaints were dealt with, but in 28 instances the complaints were found to be without foundation in fact. The staff made 1,873 visits of inquiry to premises known or suspected of rat infestation.

The greater number of these premises are now reported clear of vermin, although 198 premises are still receiving attention.

The premises found to be most infested by rats were—stables, farms, piggeries, and warehouses where foodstuffs are usually stored, in the order named.

348 baits were laid in the public sewers—every district being tapped—and 263 taken, while at the rail-

way stations, of 195 baits laid, 164 were taken—therefore at these places the mortality rate should be correspondingly high.

It is impossible to estimate the actual number of rats killed, but it is known that, including those killed at the port, 1,753 carcasses were found during the week.

As Executive Officer, I would again emphasise the necessity of keeping up a steady war against the vermin. With effective rat-proofing and the storage of foodstuffs in metal bins, wherever practicable, the menace can be well kept in hand.

Thanks are due to the press, the cinema proprietors, the Corporation and harbour officials, the chemists, the ironmongers, and all occupiers who so heartily co-operated during this recent campaign.

In the beginning of 1920 the work of rooting out these undesirable pests was tackled in a methodical and determined manner through the powers and provisions of the above-mentioned Act. Looking back now over a period of four full years of work under this head it cannot be recorded otherwise than that the results achieved, so far as possible to ascertain, are satisfactory. On the other hand, much yet remains to be done. Although we can hardly ever hope to achieve a "Ratless" City, yet we aim at keeping the vermin well within bounds, prevent free and prolific breeding, oust them from their lairs and sanctuaries, retard their access to the food stuffs, make property or structural cover rat proof, so that the open must be their hunting grounds. Then we will be able to harass them, destroy their young ere they mature.

Rats have, however, been far too long tolerated or their menace ignored to an extent from which we are suffering to-day. Thus they have got a firm hold all over the city, and their breeding grounds are legion.

The various rat-killing crusades we have been carrying out are, without doubt, awakening the public to the very apparent danger—not only to structural property but to health—and with the co-operation of citizens and property occupiers, I am certain we have

a vastly decreased number of rodents within the city.

Householders are more careful now, and dispose of their food scraps, &c., in a manner the least to attract the vermin.

The professional rat catchers have kept in touch with the Department, reported to us any infested properties and the results of their operations.

Vessels arriving at the Harbour—and especially from foreign ports—are inspected, and instructions given as to the destruction or extermination of vermin on board as well as the disposal of carcasses of the dead.

Offensive Trades.

No alterations fall to be recorded under this head.

The registered premises are situated as follows :—

62 East Dock Street—Tallow melter.

Marine Parade—Tanner.

1 Park Street—Tanner.

At Public Slaughter-Houses, East Dock Street—Gut Cleaner.

At Public Slaughter-Houses, East Dock Street—Hide Factors (2).

At Public Slaughter-Houses, East Dock Street—Slaughterer of Cattle (Corporation).

At Public Slaughter-Houses, East Dock Street—Tripe Cleaner.

and to them 10 visits were made. The businesses have been conducted in a manner quite compatible with the nature of the trade, and no action of an adverse nature was found necessary.

Port Inspection.

The year 1924 saw an increase in the shipping industry at Dundee Harbour, the total number of arrivals at the port for the year being 1,137. Of these 335 came from foreign ports, an increase of 38 on the previous year, and 795 visits were paid to these vessels while in port. The number of vessels arriving direct from foreign ports was 175, whilst 160 called at other ports en route. In 95 cases vessels came from infected ports—26 direct and 69 indirect.

The cargoes mainly consisted of timber and flax

from the Baltic ports, food stuffs from the Continent and America, while the Eastern trade consisted of jute, gunnies, linseed, hemp, cotton seed and tea.

During the Inspection of vessels arriving here from foreign ports, the total number of defects and nuisances brought under the notice of the Officers in charge was 303. Of these 296 were remedied while the vessels were in port. The 7 nuisances unabated were left over to allow the vessels to proceed to other ports to "pay off." The defects were to be put right ere the re-commissioning of the ships.

Accumulations of refuse and waste food on the decks are still common, owing to **the lack of Ash-pit accommodation** at the **Harbour and Wharves**. This refuse is thrown overboard after the vessels proceed to sea, but **the provision of ash-pits or bins for this refuse is urgently required** at this **Harbour**.

Rat Notices, to the number of 141, were issued, and rat guards or tar and canvas recommended to be placed on the mooring ropes, while the use of traps on board these vessels was also brought under the notice of the masters. The fumigation of ships was found to be of frequent occurrence, whilst many of the ships carried cats or dogs for rat destruction.

Fourteen cases of sickness, none of a serious nature, were reported—1 being removed to the Royal Infirmary, 1 to King's Cross Hospital, and 12 were treated on board the vessels.

Total Number of Verbal Intimations	...	...	...	643
Total Number of Special Rat Instructions Issued	...	...	...	141
Total Number of Visits to Ships	...	...	...	795
Total Number of Forecastles Disinfected for Tuberculosis	...	...	...	1
Bedding and Clothing removed to King's Cross Hospital for Disinfection	...	...	...	1
Total Number of Ships from Infected or Suspected Ports	...	...	...	95
Total Number of Ships from Infected or Suspected Ports (direct)	...	...	...	26
Total Number of Ships from Infected or Suspected Ports (indirect)	...	...	...	69
Total Number of Nuisances or Defects attended to	...	...	...	303
Forecastles Cleaned out	...	...	...	70
Forecastles Repainted	...	...	...	6
Forecastles Walls and Ceilings washed down	...	...	...	19

Mess-rooms cleaned	...	...	...	...	7
Galleys and Store-rooms cleaned	...	...	...	...	36
Waste Food causing a Nuisance	...	...	...	...	18
Water-closets choked and repaired	...	...	...	...	12
Water-closets cleaned out, 80; re-painted, 14	...	...	...	...	94
Fresh Water Tanks cleaned out and repaired	...	...	...	...	12
Accumulation of Refuse on Deck	...	...	...	...	10
Discharge of Foul Water on Quay	...	...	...	...	4
Dirty and Broken Baths	...	...	...	...	11
Dirty Bedding	...	...	...	...	3
Bugs in Forecastsles	...	...	...	...	1

Section 164 of the Burgh Police (Scotland) Act, 1892.

Provision and Renewal of Rain Water Spouts and Downpipes.

Under the above Section the following work was executed, viz. :—

Number of Properties where the rain water spouts and conductors have been overhauled, renewed, or otherwise repaired.	Lineal feet of new rain water conducting channel rhones or gutter pipes used in the renewing or repairing of the same.	Lineal feet of new rain water conducting or downfall pipes used in the same way at the different properties.
597	13,318	6,074

General Prosecutions.

The prosecutions for the year were as under :—

Contravention of Public Health Act.	Contravention of Food and Drugs Acts.	Contravention of Shops Acts.
1	5	32
Contraventions of Margarine Acts.	Contravention of Milk Regulations, (Colouring Milk Annatto)	Total
2	6	46

Detailed particulars of each are given under the various heads.

I am, Gentlemen,

Your obedient Servant,

ROBERT MITCHELL,
Chief Sanitary Inspector.

APPENDIX.

Statement by Sanitary Inspector of Proceedings under the Public Health and other Acts during 1924.

Subordinate Sanitary Inspectors employed 20

I.—Nuisances.

Complaints received	...	...	...	...	2,522
Intimations served under Sec. 19	...	...	...	...	13,505
Notices served under Sec. 20	...	...	...	...	9
Cases in which legal proceedings were taken				...	1
Do.	do.	do.	successful	...	1

II.—Workshops.

Inspections	...	...	...	...	...	1,869
Notices served under Sec. 2 (3) of Factory and Work- shop Act, 1901	...	...	...	...	...	0
Cases in which legal proceedings were taken					...	0
Do.	do.	do.	successful	...		0

III.—Tents and Vans.

Inspections	101
-------------	-----	-----	-----	-----	-----	-----	-----

IV.—Underground Dwellings.

Reported to Local Authority	...	...	...	...	...	0
Notices to Owners (Sec. 74)	...	...	...	...	...	0
Cases in which legal proceedings were taken					...	0
Do.	do.	do.	successful	...		0

V.—Common Lodging-Houses.

On Register at 31st December, 1924	...	...	...	...	...	1
Common Lodging - Houses belonging to the Local Authority	...	...	...	...	...	0
Inspections between 8 a.m. and 10 p.m.	...	...	...	...	...	53
Inspections between 10 p.m. and 8 a.m.	...	...	...	...	...	5
Intimations of Irregularities sent to Keepers	...	...	...	...	...	0
Cases of Infectious Disease reported to Medical Officer (Sec. 97)	...	...	...	...	...	0
Unregistered Premises dealt with	...	...	...	...	...	0
Cases in which legal proceedings were taken (breaches of bye-laws, &c.)	...	...	...	...	...	0
Cases in which legal proceedings were successful					...	0

VI.—Houses Let in Lodgings.

On Register at 31st December, 1924	...	...	...	102
Inspections	...	...	...	861
Cases in which legal proceedings were taken	...	...	...	0
Do.	do.	do.	successful	0

VII.—Infectious Diseases.

Visits of Inquiry, &c.	...	...	...	...	6,526
*Patients removed to Hospital	...	...	...	...	1,439
*Persons removed to House of Reception	...	...	...	...	0
Notices served under Sec. 50 (2)	}				2,391
Notices served under Sec. 53 (2)					
Intimations to Education Authorities, Teachers, &c.	...	...	...	...	3,250
Houses or Premises disinfected	...	...	...	...	1,834
Sets of Clothing, Bedding, &c., disinfected or destroyed	...	...	...	...	26,763
Cases in which legal proceedings were taken	...	...	...	...	1
Do.	do.	do.	successful	...	1

*Only those removals in which the Sanitary Inspector has personally, or by his assistants, taken part should be inserted.

VIII.—Burials.

Burials undertaken in terms of Sec. 69	66
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IX.—Dairies, Cowsheds, and Milkshops.

On Register at 31st December, 1924	886
Inspections	3,018
Contraventions of Order or Regulations dealt with	...	...	...	0
Cases in which legal proceedings were taken	...	...	...	0
Do.	do.	do.	successful	0

X.—Slaughter-Houses and Offensive Trades.

Applications under Sec. 32 for sanction to establish	...	...	...	0
Applications granted	...	...	...	0
Applications under Sec. 33 for Licence or Renewal of Licence	...	...	...	0
Applications granted	...	...	...	0
Public Slaughter-Houses (if any) belonging to Local Authority	...	...	...	1
Private Slaughter-Houses	...	...	...	0
Unlicensed Slaughter-Houses dealt with	...	...	...	0
Inspections of Slaughter-Houses	...	...	...	35
Inspections of other Offensive Businesses	...	...	...	10
‡Number of such other Offensive Businesses at 31st December, 1924	...	...	...	7
Cases in which legal proceedings were taken (breaches of bye-laws, &c.)	...	...	...	0
Cases in which legal proceedings were successful	...	...	...	0

XI.—Unsound Food.* (See table appended.)

Inspections under Sec. 43	(a) Meat	...	...	2,841
	(b) Other Foods	...	...	5,867
Seizures of Unsound Food	(a) Meat	...	...	0
	(b) Other Foods	...	...	44
Animals or carcasses or articles of food destroyed with owner's consent by or at the instance of the Sanitary Inspector	...	...	...	44
Cases in which owners of Unsound Food were prosecuted				0
Convictions in connection with above cases	...	...	...	0

XII.—Analysis of Samples.†

	Sale of Food and Drugs Acts. Number.	Cond'n's'd Milk Regulations. Number.	Dried Milk Regulations. Number.
Samples procured for Analysis	679	5	0
Certified to be genuine ...	654	5	0
Certified to be adulterated ...	25	0	0
Cases in which legal proceedings were taken ...	5	0	0
Cases in which legal proceedings were successful ...	5	0	0

XIII.—Rag Flock Act, 1911.†

Samples procured for Analysis	...	...	...	...	8
Certified to conform to Board's standard	...	...	...	...	8
Certified not to conform to Board's standard	...	...	...	...	0
Cases in which legal proceedings were taken	...	...	...	...	0
Do.	do.	do.	successful	...	0

XIV.—Bye-Laws.

Inspections in carrying out bye-laws relating to:—

(a) Pigstyes	...	...	...	...	750
(b) Public Conveyances	...	...	under charge	of Police.	
(c) Buildings	...	...	...	...	1,743
(d) Cleansing in Special Scavenging Districts	...	...	...	...	0
(e) Other sanitary matters	...	...	...	...	75,050

‡State nature of such offensive businesses and number of each.

*Only those inspections and seizures in which the Sanitary Inspector has personally taken part should be inserted. He is also requested to give on the fly-leaf a statement of the nature and quantities (or weights) of the food seized. *Inspections made by him at Slaughter-Houses, &c., as Meat Inspector or Detention Officer under the Public Health (Meat) Regulations (Scotland), 1924, should NOT be included.*

†Only those samples which have been procured by the Sanitary Inspector personally, or by his deputies, should be inserted here, and the Sanitary Inspector is requested to give a statement of the articles analysed:—Milk, butter, pepper, &c.

OTHER ARTICLES OF FOOD DESTROYED FOR THE YEAR.

ARTICLES.	WHERE SEIZED.	QUANTITIES OR WEIGHTS.				REASONS FOR SEIZURE.
		Tons.	Cwts.	Qrs.	Lbs.	
Tinned Meat ...	In Shops, Stalls, Barrows on Streets, Markets, Railway Stations, or at the Port of Dundee.	0	3	1	22	Decomposition.
Meat Paste ...		0	0	3	24	
Tinned Chicken Roll		0	0	0	9	
Venison ...		0	0	3	12	
Fruit ...		1	16	1	25	
Tinned Fruit ...		0	0	3	5	
Fish ...		0	5	2	0	
Tinned Fish ...		0	0	0	6	
Shrimps ...		0	0	1	20	
Tinned Tongue ...		0	0	0	20	
Fruit Salad ...		0	0	2	10	
Condensed Milk		0	0	0	18	
Tinned Soup ..		0	0	0	8	
Tinned Eggs ...		0	0	0	2	
Tinned Pickles and Sauces ..		0	0	2	12	
Potatoes ...		3	13	2	0	
Vegetables ...		0	0	2	16	
Tinned Vegetables		0	0	0	5	
Syrup ...		0	0	0	2	
And in addition— Rabbits		39½ pairs				

† Number of Other Offensive Businesses.

Tallow Melters	...	...	...	1
Tanners	...	...	...	2
Gut Cleaners	...	...	...	1
Tripe Cleaners	...	...	...	1
Hide Factors	...	...	...	2
Total			...	<u>7</u>

†Sale of Food and Drugs Acts.

ARTICLES ANALYSED.

Sweet Milk	...	...	...	344
Condensed Milk	...	...	...	5
Margarine	...	...	...	64
Coffee	...	...	...	16
Ground Rice	...	...	...	9
Whole Rice	...	...	...	19
White Pepper	...	...	...	40
Black Pepper	...	...	...	3
Cream of Tartar	...	...	...	30
Tapioca	...	...	...	6
Ground Ginger	...	...	...	14
Baking Soda	...	...	...	10
Cinnamon	...	...	...	23
Pot Barley	...	...	...	7
Lard	...	...	...	2
Cream	...	...	...	1
Fresh Butter	...	...	...	3
Salted Butter	...	...	...	7
Oatmeal	...	...	...	4
Flour	...	...	...	10
Cream Puddings	...	...	...	1
Vanilla and Lemon Essence	...	...	...	5
Treacle	...	...	...	1
Tinned Fish	...	...	...	3
Baking Powder	...	...	...	1
Ice Cream	...	...	...	6
Tinned Beef	...	...	...	1
Whipped Cream	...	...	...	1
Potted Meat Paste	...	...	...	3
Mixed Pickles	...	...	...	1
Cream Cakes	...	...	...	5
Double Cream	...	...	...	1
Custard Powder	...	...	...	4
Jam	...	...	...	2
Syrup	...	...	...	1
Spice	...	...	...	3
Tinned Pears	...	...	...	1
Fruit Salad	...	...	...	1
Fruit Relish	...	...	...	1
Whisky	...	...	...	1
Whites of Pickled Eggs	...	...	...	1
Vinegar	...	...	...	4
Glycerine	...	...	...	3
Olive Oil	...	...	...	2
Mustard	...	...	...	3
Castor Oil	...	...	...	3
Ammonia	...	...	...	1
Sauce	...	...	...	7

Total ... 684

CITY OF DUNDEE

VITAL STATISTICS OF THE VARIOUS WARDS 1924

1- 16.54
2-108
3- 1.45
4- 1.00
5- 1.40
6- 20.13

WARD 7

1- 17.20
2-137
3- 1.93
4- .54
5- 1.33
6- 25.50

WARD 3

1- 17.64
2-96
3- 1.59
4- .95
5- 1.48
6- 26.88

WARD 8

1- 16.64 3- 1.71 5- 1.07
2- 136 4- .88 6- 23.69

WARD 9

WARD 2

1- 16.58 4- .56
2- 144 5- .80
3- 2.42 6- 21.84

1- 13.47
2-112
3- 1.48
4- .65
5- 1.04
6- 21.27

WARD 5

1- 14.82
2- 121
3- 1.54
4- .92
5- 1.18
6- 20.81

WARD 4

WARD 1

== *Rates for whole City.* ==

1- 16.4 PER 1000 POPULATION

2- 120 . . . BIRTHS.

3- 1.69 . . . POPULATION

4- .85 . . . "

5- 1.23 . . . "

6- 22.6 . . . "

1- 13.45
2- 71
3- .36
4- .45
5- .54
6- 14.00

WARDS 10 & 11.

- 1 *Death Rate — all causes*
- 2 *Infantile Death Rate*
- 3 *Zymotic Death Rate*
- 4 *Pulmonary Tuberculosis Death Rate.*
- 5 *Tuberculosis (all forms) Death Rate.*
- 6 *Birth Rate.*

